

THE  
ARCHITECT  
& BUILDING NEWS

27 DECEMBER 1956 · VOL. 210 · NO. 26 · ONE SHILLING WEEKLY

• L.C.C. SCHOOL, TULSE HILL

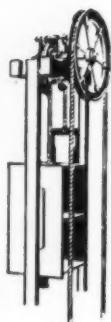
• CURRENT MARKET PRICES  
AND MEASURED RATES

PUBLISHED IN LONDON SINCE 1854

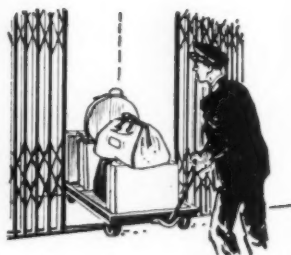
**BRADY**  
REGD.

# HAND AND POWER OPERATED LIFTS

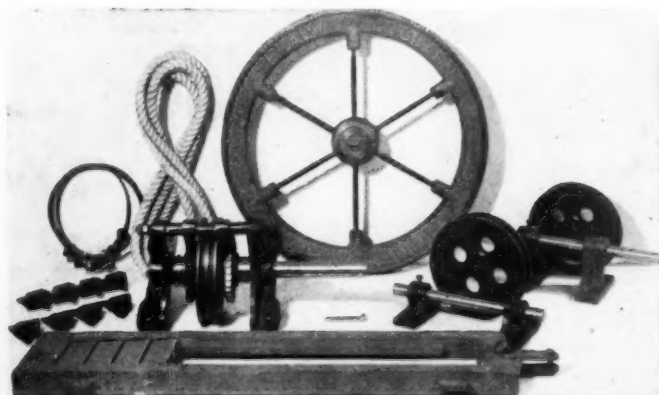
## Service



## Goods



## Passenger



### Recommended Cage Sizes for Service Lifts

28lb	-	1ft 6in by 1ft 3in by 2ft 6in.
56lb	-	1ft 9in by 1ft 6in by 2ft 9in.
84lb	-	2ft 0in by 1ft 9in by 3ft 0in.
1cwt	-	2ft 3in by 2ft 0in by 2ft 6in.
1½cwt	-	2ft 6in by 2ft 0in by 3ft 6in.
2cwt	-	2ft 6in by 2ft 3in by 3ft 6in.
3cwt	-	2ft 9in by 2ft 6in by 4ft 0in.
4cwt	-	3ft 0in by 2ft 9in by 4ft 6in.
5cwt	-	3ft 0in by 3ft 0in by 5ft 0in.

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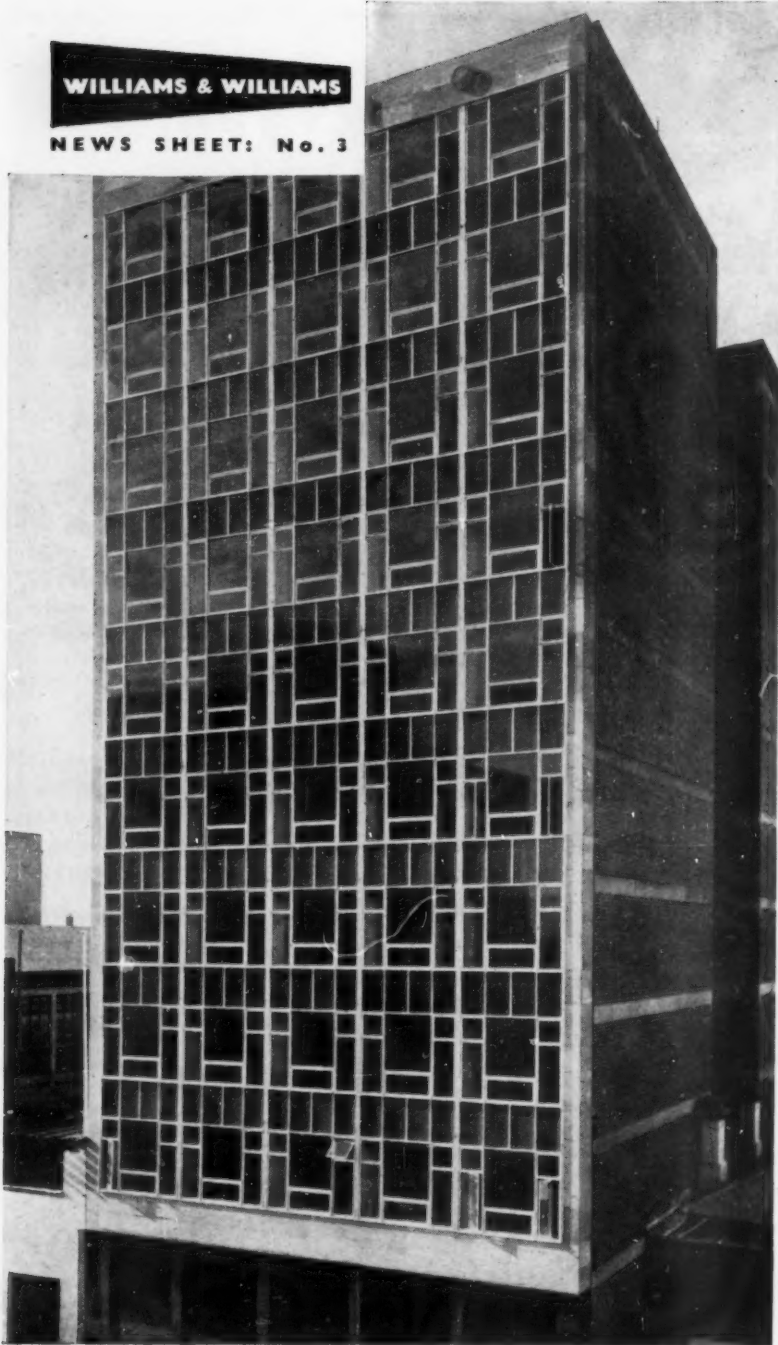
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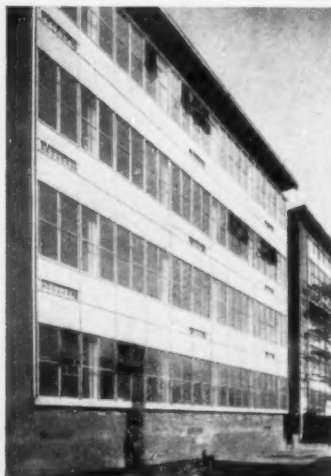
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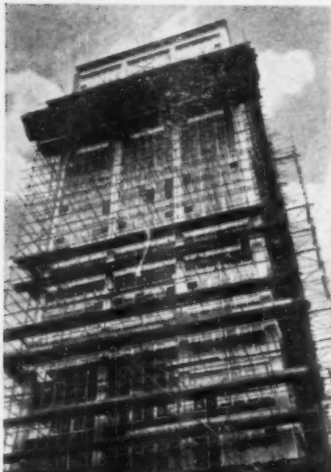
**WILLIAMS & WILLIAMS**

**NEWS SHEET: No. 3**

- 1** State Government Insurance Offices,  
Perth, West Australia.  
Architects: Hobbs, Winning & Leighton.
- 2** Beecham Factory, St. Helens, Lanes.  
Architects: Quiggin & Gee.
- 3** Fountain House,  
Fenchurch Street, London, E.C.3.  
for the City of London Real Property Ltd.  
Architect: W. H. Rogers A.R.I.B.A.  
Consulting Architect:  
Sir Howard Robertson,  
M.C., A.R.A., P.P.R.I.B.A.
- 4** Head Offices, for the National Dock  
Labour Board, London, S.E.1.  
Architect:  
Frederick Gibberd, C.B.E., F.R.I.B.A., M.T.P.I.
- 5** A.I.A. Building, Singapore.  
Architect: John Graham.
- 6** B.C. Electric Headquarters,  
Vancouver, Canada.  
Architects:  
Sharp, Thompson, Berwick & Pratt.
- 7** Tyrrell & Green Store, Southampton.  
Architects:  
Yorke, Rosenberg & Mardall, F.F./A.R.I.B.A.



2



3

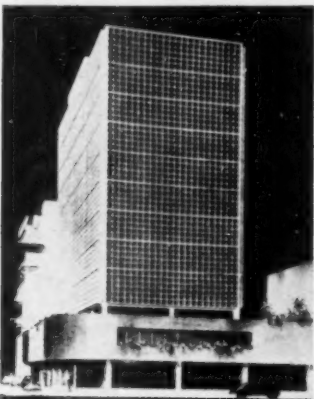
## THE TURN OF THE YEAR

On these pages we show a few of the contracts with which we have been associated during 1956—some completed, some still “work-in-progress”—and others which will come into being during 1957. After all, this is the time of the year when nobody wants to be advertised at (or any other time?) which is a rather obtuse way of wishing you all a very Happy New Year!

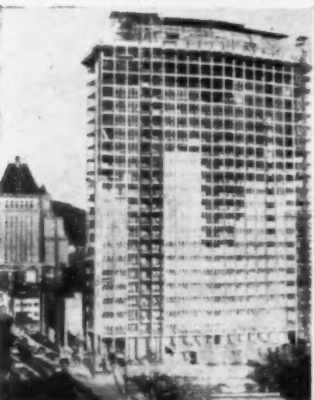




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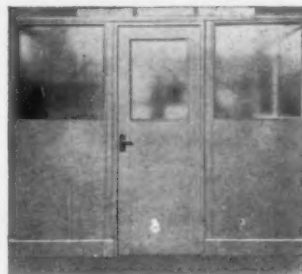


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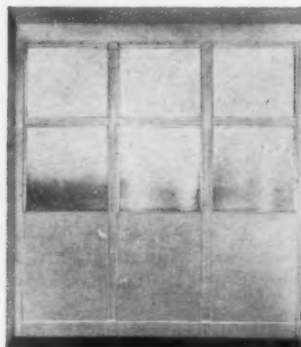
## New ROFTEN PARTITIONING

The Pressed Metal Division of Williams & Williams announce the introduction of a completely new system of demountable glass-and-steel, fire-resistant partitioning for offices and showrooms. It can be supplied to suit any ceiling height from 8 ft. 6 in. upwards or alternatively installed as 7 ft. 2 in. screening or 3 ft. 6 in., 4 ft. 10 in. and 5 ft. 10 in. barrier screens.

A leaflet is available—please contact your nearest Williams & Williams Area Office for copies.

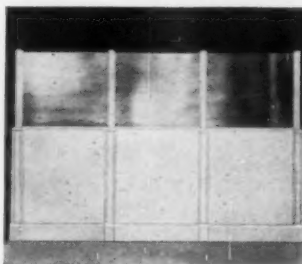


7 ft. 2 in. screening.



Ceiling-height partitioning.

Roften Partitioning gives the utmost flexibility for arrangement and re-arrangement, while retaining the advantages—stability, sound insulation and so on—of permanently built-in partitioning.



3 ft. 6 in. barrier screen.

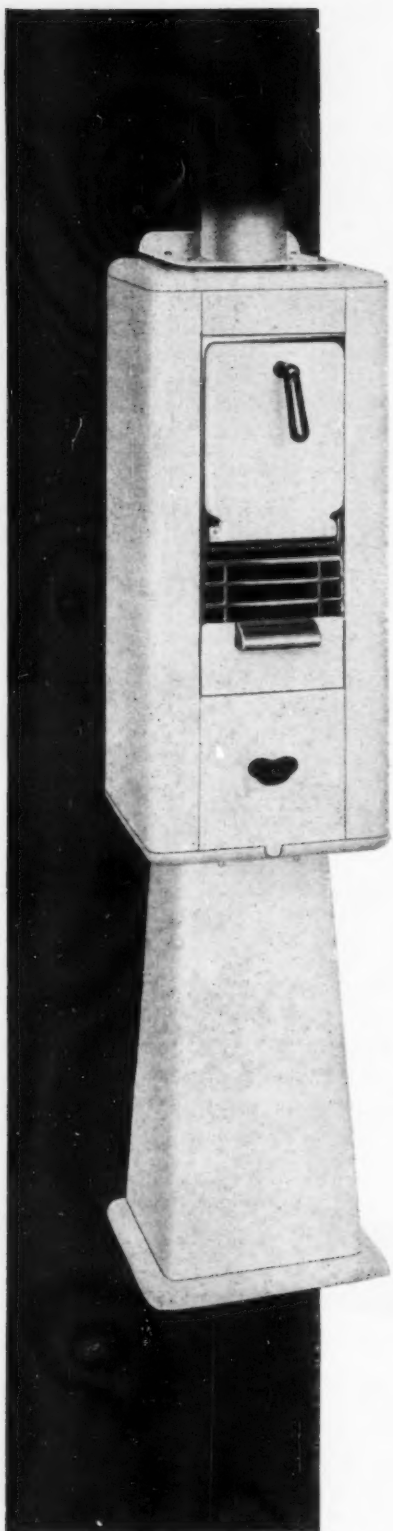
**NOTE:** With reference to the Williams & Williams News Sheet No. 1 in this journal, which featured the new Bata Store in Oxford Street, W.1, we would like to make it clear that Messrs. Cotton, Ballard and Blow were the architects responsible for the general structure for the building owners. Messrs. Bronek Katz and R. Vaughan designed the Oxford Street façade and store for Messrs. Bata Ltd.

**WILLIAMS & WILLIAMS**

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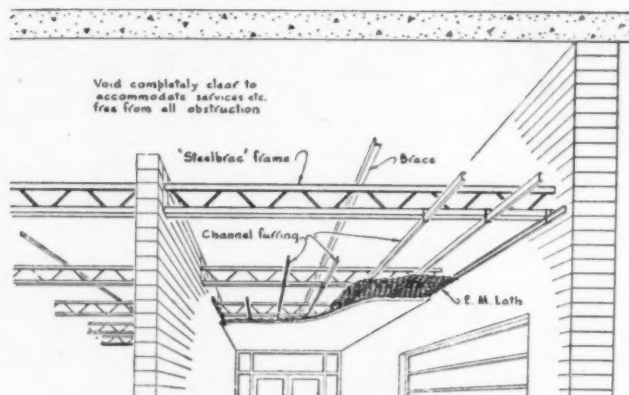
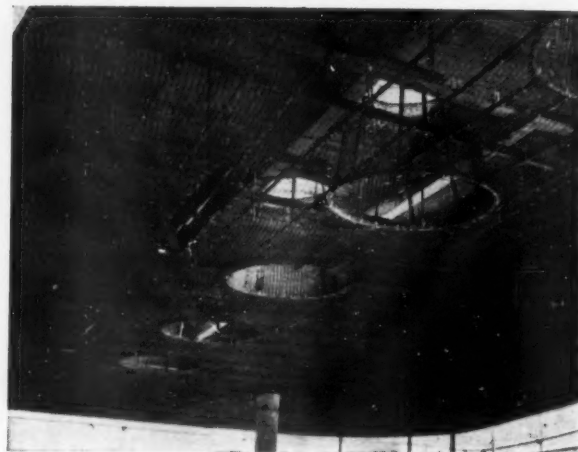
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about Steelbrac  
framing for ceilings?"*

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*Illustrations:*

*Above—Steelbrac lathing ready to receive plaster.*

*Left—Details of construction showing void for services.*

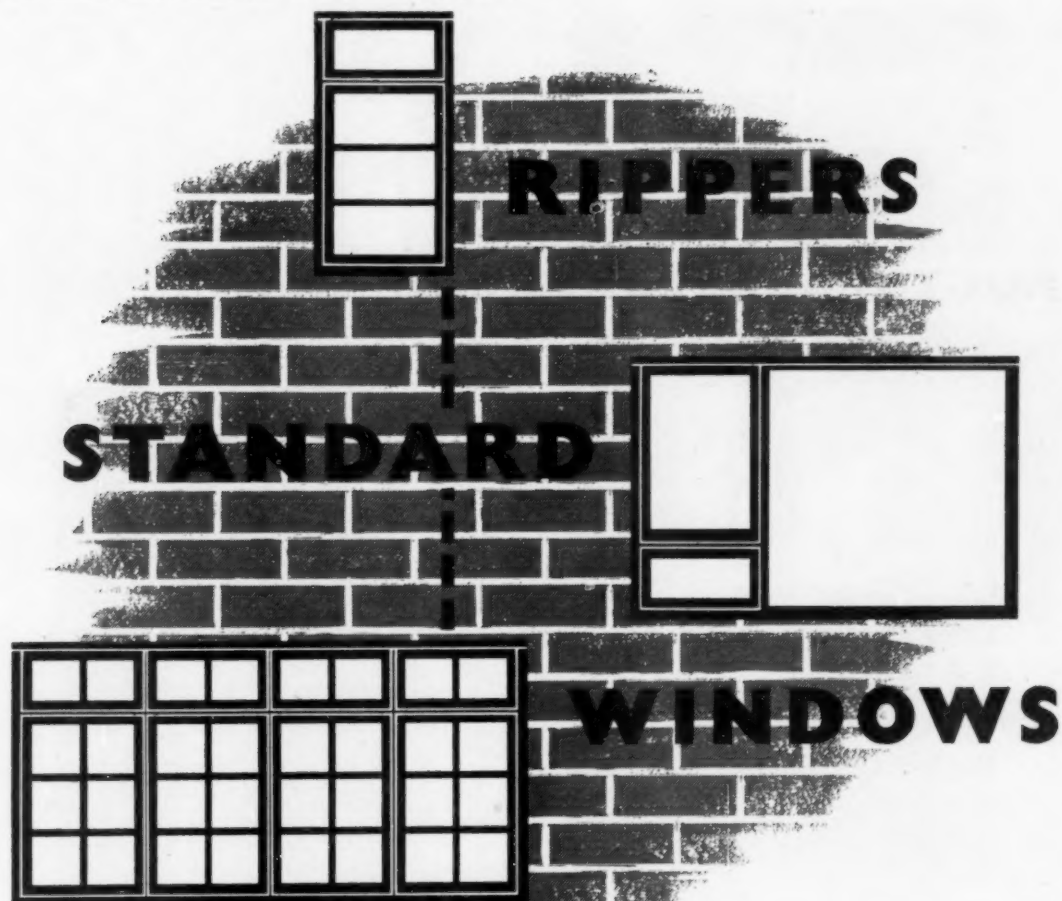
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business'**

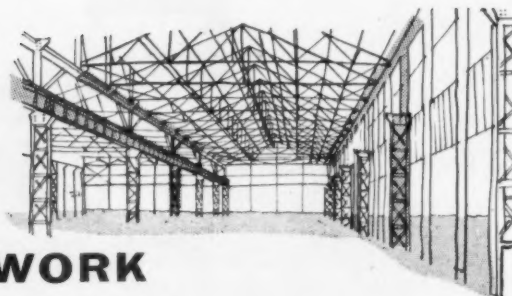
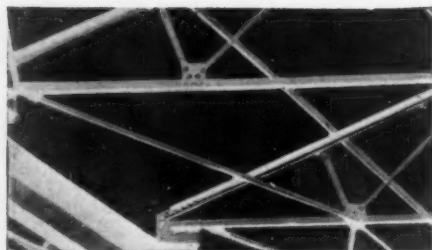
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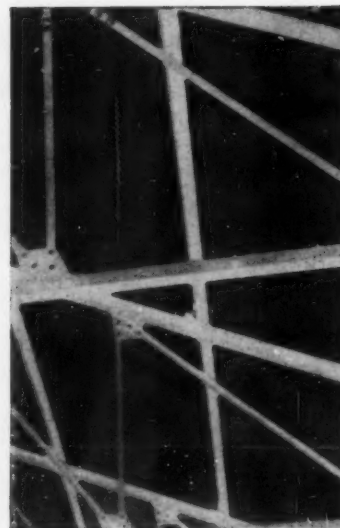
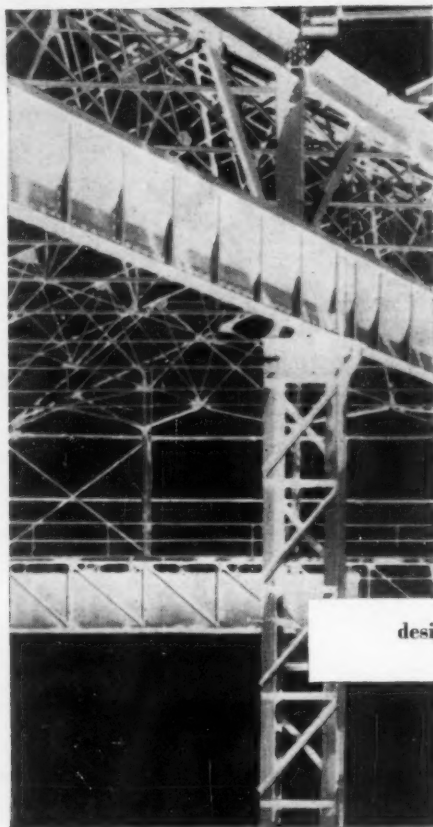
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Eclipse Works, Petershill Road, Glasgow, N. TELEPHONE: Springburn 5151  
Ashton Gate Works, Bristol, 3. TELEPHONE: Bristol 64041. And Falkirk

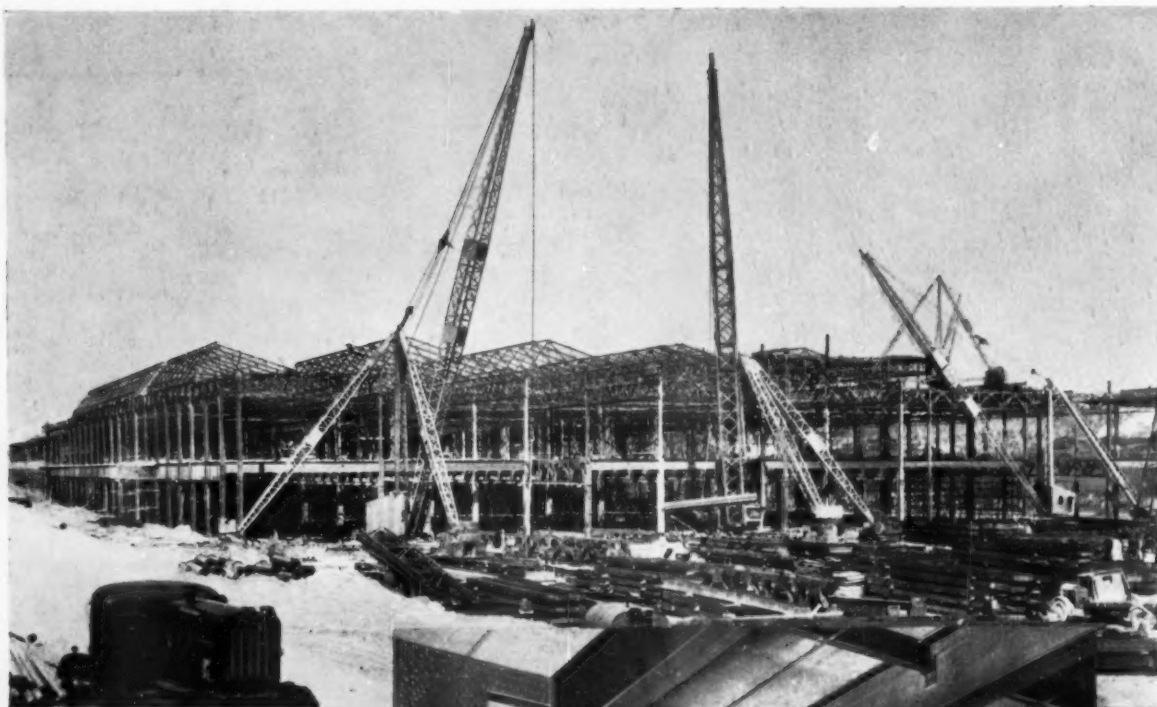
OTHER OFFICES: 110 Cannon Street, London, E.C.4 (Export). TELEPHONE: MANAION House 6034  
Queen's Buildings, 10 Royal Avenue, Belfast. TELEPHONE: Belfast 26509  
Palace Street, Plymouth. TELEPHONE: 62261

AP266-249



*Background to Beauty. Pearl grey 'VITROLITE' by Pilkington Brothers Limited, St. Helens, Lancs.*

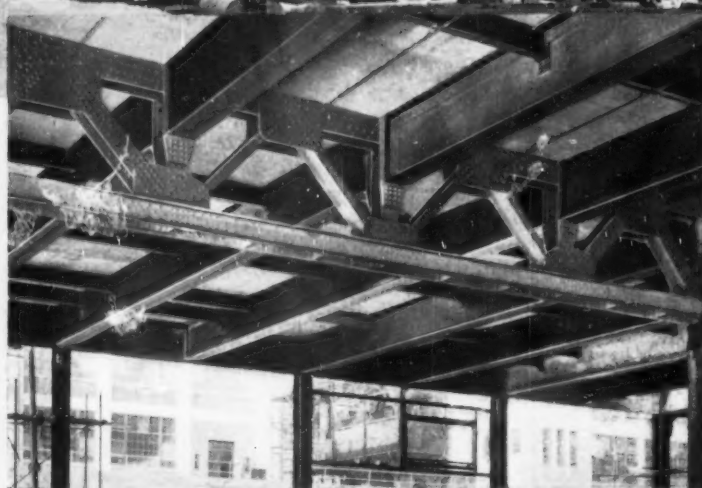
'VITROLITE' IS AVAILABLE IN THE FOLLOWING COLOURS: PEARL GREY, PRIMROSE, GREEN, GREEN AGATE, TURQUOISE, EGG SHELL, CREAM, IVORY, BLACK, WHITE.  
SUPPLIES ARE AVAILABLE THROUGH THE USUAL TRADE CHANNELS. 'Vitrolite' is a registered trade mark of Pilkington Brothers Limited.



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*Consulting Engineers:*  
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*Contractors:*  
Sir Robert McAlpine & Sons Ltd.



Approximate total weight 20,000 tons, of which over 17,000 tons were erected in twelve months. The lower illustration shows one of the 168 main girders supporting the assembly floor.

## STEELWORK BY REDPATH



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*Grades for all  
purposes*



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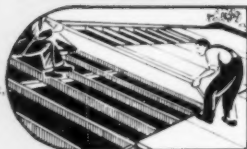


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**BUILDING SLABS**

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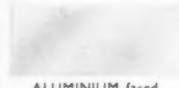
STANDARD quality



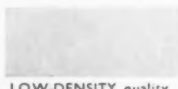
HARDBOARD faced



ROOFING quality



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Member of the  Metal Windows Association

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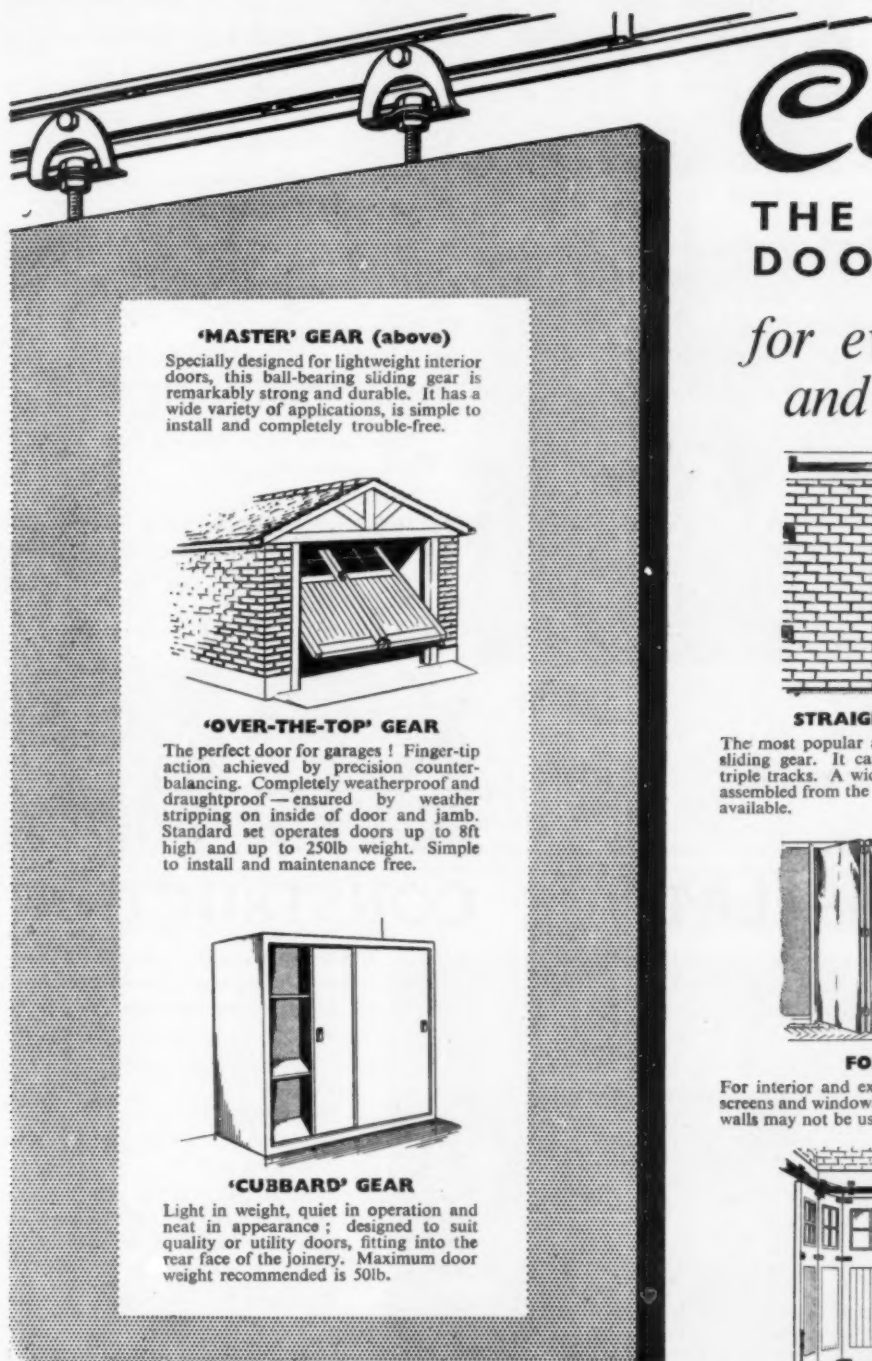
(Established 1868)

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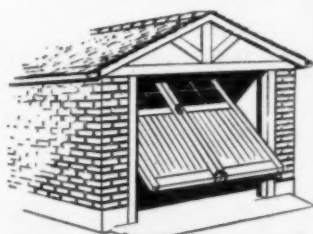






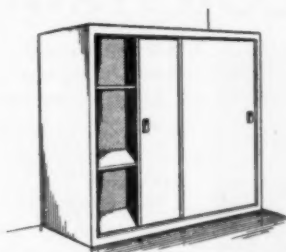
**'MASTER' GEAR (above)**

Specially designed for lightweight interior doors, this ball-bearing sliding gear is remarkably strong and durable. It has a wide variety of applications, is simple to install and completely trouble-free.



**'OVER-THE-TOP' GEAR**

The perfect door for garages! Finger-tip action achieved by precision counterbalancing. Completely weatherproof and draughtproof — ensured by weather stripping on inside of door and jamb. Standard set operates doors up to 8ft high and up to 250lb weight. Simple to install and maintenance free.



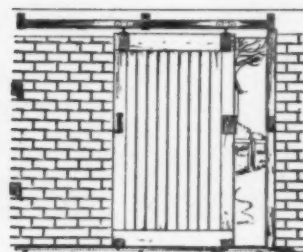
**'CUBBARD' GEAR**

Light in weight, quiet in operation and neat in appearance; designed to suit quality or utility doors, fitting into the rear face of the joinery. Maximum door weight recommended is 50lb.

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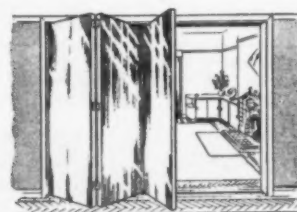
## THE SLIDING DOOR GEAR

*for every place and purpose*



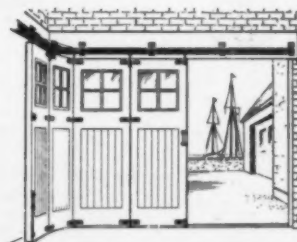
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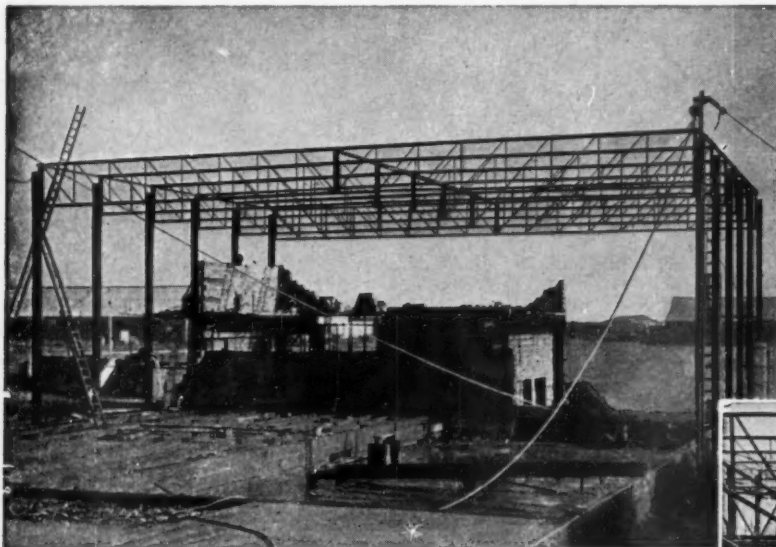
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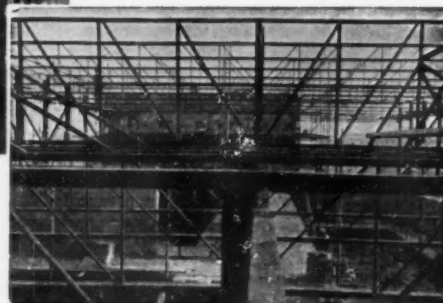
52ft lattice girders at a Portsmouth factory. Architects: Thomas Jolly & Grant  
 Contractors: John Hunt Ltd.

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# THE ARCHITECT & BUILDING NEWS

December 27 1956

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## LOOKING BACK

THERE comes a time at Christmas when the noisy jubilant festivities are over and even the excitements of Boxing Day fade. Then it is that most of us, perhaps relaxing before the fire, begin to feel reflective. Personal and public recollections fill our minds and even the most practical of men pauses to wonder what the year's exertions have been worth. At such a moment it is tempting to look back to an earlier day, "to things past, with their manifold and mysterious message". It is difficult not to wonder if the meaning of events were as puzzling and obscure to our forefathers of a hundred years ago. Did they feel as we; was there the same confusion about the day and age or did they understand the march of the caravan as we do not?

Certainly the sonorous echoes of that age sound with names to conjure with: Peel, Palmerston, Disraeli, Gladstone, Cobden, Bright. These names and many another stand like giants in the plain. Yet were these the men that mattered, was it they who presaged the shape of things to come, in that year of 1856? Peel's public career had come to a sudden end nearly ten years before with the repeal of the Corn Laws. Gladstone, too, was in the wilderness. In the year before when Chancellor of the Exchequer under Palmerston he had opposed the appointment of a Committee of Inquiry into the Crimean scandals. When the House of Commons, urged on by Disraeli, had insisted on the appointment, Gladstone resigned. "His action", Sir Philip Magnus has said, "was regarded as irresponsible, cowardly, unpatriotic. His speech of explanation made no impression upon the House and he was accused of running away from the Committee of Inquiry after having helped to mismanage the war."

And the war it was which dominated the scene. France had been a potent influence in bringing about the event, and the diplomatic prelude was strange indeed. Russia and Turkey were at odds and were said to be on the verge of war. Britain in her Vienna Note of July, 1853, had proposed a settlement on certain terms, which Turkey refused; so we went to war against

the Russians. In the ensuing fight the antecedent diplomatic incompetence paled before the chaos which reigned in military and administrative affairs. The nation paid for the adventure with 25,000 lives; the loss of 16,000 of them due to bad administration. Those who fought paid with appalling suffering and privation. Through the columns of *The Times*, William Russell revealed to a horrified public a panorama of war unequalled for incompetence and ineptitude.

In April the senseless conflict had drawn to its close. It was an unrewarding end. Upon the colours of the British Army were to be emblazoned new honours; the names of Alma, Balaclava, Inkerman, were to become wonderfully familiar to us. But the cost was heavy and little else was to be seen of gain. Many great names were in doubt or in disrepute. Ministers, politicians and generals shared public odium. As the statesmen gathered in Paris for the peace conference they can have had little on which to congratulate themselves. Indeed who can now recall what they said or did there? Britain put her hand to a Declaration of Paris which lives in our memory no longer. But amid all the welter of recrimination and accusation which clouded the closing days of the war and filled the months to follow, one name alone survived untarnished; one reputation glowed with astonishing brightness.

On July 16, 1856, the doors of an institution closed. Though many of us may be vague about the details of the war or why it was fought yet all know the name of that place; the base hospital at Scutari has a special claim on the public memory. There was established the legend of Florence Nightingale. "She ended the war obsessed by a sense of failure. In fact in the midst of muddle and filth, the agony and the defeats, she had brought about a revolution."

The revolution which was to effect, there in the base hospital and in the long years ahead from her room in South Street, has reached every corner of our modern lives. The range and breadth of what she achieved is literally astonishing. She changed our outlook on the work of women. Her influence permeated a



continent she had never seen. Nursing was her creation. "Never again would the picture of a nurse be a tipsy, promiscuous harridan. Miss Nightingale had stamped the profession of nurse with her own image." The building of hospitals and homes received her close attention and still benefits from it. Many another thing felt the impress of her hand and mind. Yet, in her return from the Crimea her work was only beginning. In that year of 1856 her arrival in England was nearly unreported and wholly unspectacular. Amid the great events of the day, the political confusion and the diplomatic tangles, there was in her work maybe the

most memorable and lasting thing to be found. "From the frozen and blood-stained trenches before Sebastapol, and from the horrors of the first Scutari hospitals, have sprung not only a juster national conception of the character and claims of the private soldier", writes Trevelyan, "but many things in our modern life at first sight seem far removed from scenes of war and the sufferings of our bearded heroes on the winter-bound plateau."

Yet in the tribulations of those times, perhaps it was no easier to see where lasting influences lay, than for us in our time.

## EVENTS AND COMMENTS

### THE CHANGING STRAND

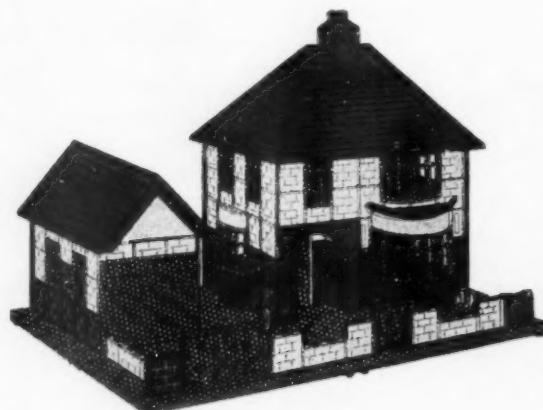
The Tivoli in the Strand is soon to disappear, I imagine that no one will be very sorry. The new building will, I believe, contain a cinema but will mainly be an office building. Recently on some other business I was in the wine vaults under the Adelphi and saw trial holes for the new building being dug. Buildings on the north side of John Adam Street, adjoining the R.S.A., have two basements and then vast brick vaults below. In these vaults wine is bottled and stored in quite remarkable quantities.

Moving west from the Tivoli the road suddenly narrows and continues thus to Charing Cross station yard. This block is coming down early in the New Year. It consists of a number of curiously varied tall, narrow buildings of no architectural merit. I am no Strand-lover but Kingsley Martin—who lives round the corner—is. Writing recently in the *New Statesman* he regrets the passing not of the Strand frontage but of the little streets and alleyways behind, which provide so much of the character of this area. I went to look at them and found it hard to agree with Mr. Martin. Having no personal association with the area it seemed to me to be over ripe for the demolition contractor. I could, however, see exactly what Mr. Martin meant for I have my own favourite bits of Tottenham Court Road and the areas to the west of it.

I did find one curious relic off the Strand. It could easily be the first Kodak shop. Now it is empty and boarded up but the name is still there set in applied lettering surrounded with incised *art nouveau* foliage. "Cameras," it reads, "from five shillings to one guinea."

### DELIGHTFUL FREEHOLD RESIDENCES

The Estates Gazette sells model houses, of the type illustrated in my picture, for estate agents to put in their office windows. "Each model", says the blurb, "is an excellent replica of an actual building". That's excellent.



See "Delightful Freehold Residences"

### "EVENING NEWS" RIVERSIDE HIGHWAY

An L.C.C. statement, agreed by the M.o.T. and P.L.A., thanks the *Evening News* for its initiative, but regretfully concludes, after two pages of reasons why, that it cannot support the scheme at the present time.

The reasons why seem to me to be entirely valid.

### THE NATIONAL GALLERY JANUARY, 1955 — JUNE, 1956

This report is impressive not only for its production, which is of a very high quality, but also for its content. I like to be impressed by such things as "Published by order of the Trustees" and the opening "My Lords" to the Foreword.

The National Gallery, like everyone else, needs more money. It needs it for buying new pictures, its annual grant for this purpose being absurdly inadequate, but above all it needs space and the money to expand.

I can strongly recommend the report as entertaining reading, not only for the plans which the Gallery has for expansion, but also for its account of the methods used in cleaning and restoring pictures which I found fascinating. The report is handsomely illustrated with colour and black and white plates.



## NEW DESIGNS FOR STREET FURNITURE

The C.o.I.D.'s Street Furniture Panel continues to do very good work. The December issue of *Design* contains an article in which some new ideas are explained and illustrated. The new designs include lighting standards and brackets, a bus shelter and the inevitable parking meter. The bus shelter is particularly interesting as a case history. Henry Hope & Sons Ltd., produced the prototype early in 1955 and submitted the design to the panel. The panel liked the vertical part and quite rightly disliked the clumsy cantilevered roof. Although Hopes had already spent a lot of money in tooling up for the original design they readily accepted the C.o.I.D.'s criticisms, and after a series of meetings between the secretary of the panel and executives of the firm, a new design was developed. The designers are J. S. Williams and D. K. McGowan.

This is a most satisfactory outcome, but the moral seems to be to consult the C.o.I.D. first and tool up afterwards.

The article also includes the unfinished case history of a design for a new sign for Shell-Mex B.P. Ltd., by Jack Howe.

## FESTIVAL FLASHBACK

As a Christmas treat the Building Centre last week put on two films of the South Bank Exhibition. The audience was smaller than I would have expected, but included a number of people who had worked on the Exhibition. Some of them found the films too nostalgic for comfort, and here and there I saw a damp eye. As one designer said to me afterwards, "we shall never

have another Festival. We have had our turn, it is behind us and we can never look forward to another." What fun it all was and how unreal it looked after five years. What was so odd was that only half an hour before I went to the show I had had one of these anti-festival fellows in my office. He was full of regrets at the opportunities missed on the south bank. At first I thought that he was referring to the wing-clipping financial restrictions placed upon the organizers, but I was wrong. He disliked it all, but he did not say what he would have had in its place.

## SCHOOL CURTAINS II.

Opening today at the B.C., Gerald Holtom's show of School Curtains which I mentioned last week. I had a partial preview after the film show. If all the curtains are as exciting as the sample I saw it will be a thoroughly good exhibition.

## QUIETER LONDON

How very pleasant the streets of London have become now that the petrol rationing has returned. Allowing for all those trades and individuals who genuinely depend for their livelihood on adequate supplies of petrol, I feel sure that the streets could be kept less congested if private non-essential users could be persuaded to keep out of the central areas. Perhaps only parking meters will do this for us. In the long run, however, parking meters are no solution to the problem. The R.A.C. and the other A.A. have called the meter proposals "largely restrictive", and so they are. No one in authority seems really to have grasped the idea yet that the motor car has come to stay.

ABNER

"Before" and "after" pictures of Henry Hope's bus shelter (see "New Designs for Street Furniture"). The picture below is the shelter as designed originally. The larger picture shows the new design developed after discussions with the C.o.I.D.



## NEWS

### Robert Blair Fellowships

The London County Council is inviting applications for the award of the 1957 Robert Blair Fellowship—which is tenable for one year of advanced study or research overseas in applied science and technology. The value of the award varies according to the country chosen by the person to whom the award is made and may be as much as £2,000 if the country selected is Canada or the United States. Applications for the 1957 Fellowship should be made before February 28, 1957 (particulars and application forms can be obtained from the Education Officer (WA.14) at the County Hall, S.E.1.).

Candidates must be natural born British subjects and at least 21 years of age. Fellowships are open to suitable candidates, men or women, who have been trained in applied science and technology, but preference is given to engineering science and to those who have completed a course of study in London institutions or who have been identified with the London teaching service.

### Professional Announcement

Leonard Manasseh & Partners, Chartered Architects, have moved to 39-40 Bedford Street, Strand, London, W.C.2. Telephone No. COVent Garden 2907-8.

## Law and Administration

### Building and Paying for New Streets

During the early and middle nineteenth century it often happened that houses were built and sold but no public services were provided. These were left to be supplied by the public authorities and this resulted in very heavy burden being placed upon the rates. One of the things which was often missing from new housing was an adequate street. From the time of the Public Health Act, 1875, onwards, local authorities were empowered to provide these streets but to charge the costs of so doing on the property owners whose premises fronted on to the street provided. Since 1892 such new streets have normally been built under the powers of the Private Street Works Act of that year. Under both Acts however, it was for the local authority to decide if and when it would take action to make up a street.

In 1951 an effort was made to alter this state of affairs by enabling property owners to compel a local authority to make up a street. The New Street Act, 1951, established that this could be done provided that a suitable deposit was paid at an appropriate time. This Act has given rise to a number of difficulties including many of interpretation. To deal with these difficulties Mr. Martin Maddan, M.P., has this month introduced in the House of Commons a Private Members Bill entitled the New Streets Act, 1951 (Amendment) Bill. This Bill will be of importance to many who are concerned with the building of new estates and should be carefully watched in its passage through the House. One of the most interesting Clauses in the Bill is the second. Describing the purpose of this Clause during the Second Reading (*Hansard*, Friday, December 7, 1956, col. 1630) Mr. Maddan said:

"Clause 2 clears up a doubt about the effect of the 1951 Act on Section 146 of the 1875 Act. This doubt arises from the fact that when a deposit is paid under the 1951 Act, it may be regarded as the first step by the local



*The pilgrimage church in Pocatky, from the Exhibition of Czechoslovak Architecture which closes at the R.I.B.A. tomorrow*

authority towards the local authority itself making up the road in question. This factor might be taken to rule out the subsequent making up of the road by a private developer. It might be very desirable that the private developer should make it up before the local authority does so. Furthermore in the 1951 Act there is no provision for the refund of the deposit in circumstances such as the making of an agreement under the section 146 of the 1875 Act."

That Section permits an urban authority to make an agreement with a developer which will allow the developer to do the work of construction on the new street and pay for it and for the local authority to take the road over on completion thence forward to be maintainable by the inhabitants at large. Mr. Maddan gave an interesting example of the way in which Clause 2 might operate.

"An estate developer intending to build houses fronting on a private street and selling them off as he builds them submits plans to the local authority. The 1951 procedure might be called into operation, in which case he pays a deposit. The developer, however, might decide that it would be better, and more to the satisfaction of prospective purchasers of the houses, to complete the road at once. It was just for this sort of case that Section 146 of 1875 Act was intended. . . . "Clause 2 of the present Bill makes it clear that this procedure can be called into operation after the deposit has been made, and that the deposit can, in these circumstances be refunded.

Another useful provision which this Bill proposes to make is contained in Clause 3. As the Member concerned pointed out, purchasers of building sites should be "able to find out easily and unequivocally what commitments there are to make a deposit (for new street purposes) or, if the deposit has already been made, how much." It is therefore proposed that certain details relating to these deposits should in future be entered in the local land charges register and would therefore be discovered when the usual searches are made before purchase.

## In Parliament

### More Money for Hospital Works

An announcement that £20 millions will be allocated for capital developments in the hospital service in England and Wales in 1958-59 was made by the Minister of Health. This sum compares with £13 millions in the current financial year and £18 millions proposed for next year.

Mr. Turton said that the hospital boards had already been informed of their individual allocations within the £20 millions total for the modernization of mental hospitals, the replacement of obsolete plant and ordinary capital expenditure. The programme already announced included the first phases of a number of large schemes. He hoped to authorize a further phase of the new Greaves Hall Mental Deficiency Hospital to be begun next year, and further phases of some other projects in 1958/9, including Balderton Mental Deficiency Hospital and the West Wales General Hospital, Glangwili. In that year also some big schemes already announced but not ready to begin earlier were expected to make a start.

As well as this, he had invited the boards concerned to bring to completion the planning of a number of additional major projects on the assumption that they could be started in 1958/59. These included the first phase of a new hospital at Slough; a new dental hospital at Birmingham; the reconstruction of Hillingdon Hospital; extensions to the St. Helen Hospital, Barnsley, the Orsett branch of the Tilbury and Riverside General Hospital, Poole General Hospital, Bridgend General Hospital, and Lea Castle Mental Deficiency Hospital, near Kidderminster; additional hospital facilities at Kettering, extensions to the Luton and Dunstable Hospital, and new out-patient departments at the Royal Northern Hospital, Oldchurch Hospital, Romford, and Selly Oak Hospital, Birmingham.

These major projects were additional to the building which would be undertaken by boards from their own share of the funds available for capital expenditure.

In Scotland the total provision for capital expenditure on hospital building is to be increased from £2,200,000 this year to £2,500,000 in 1957-58 and £2,700,000 in 1958-59. (Dec. 12.)

According to a statement by Mr. Henry Brooke, Financial Secretary to the Treasury, hospital capital schemes costing less than £60,000 will no longer require individual approval by the Treasury. Mr. Kenneth Robinson pointed out that the Guillyband Report had recommended a limit of £100,000, and asked why it had not been possible to go the whole way. Mr. Brooke said that £60,000 was the limit applied in most other civil and defence building paid for by the Exchequer. (Dec. 11.)

### 300,000 Again

The Minister of Housing and Local Government, Mr. Duncan Sandys, who is busy piloting his Rent Bill through a Commons standing committee, had some new points to make when he sought Parliamentary approval on December 13 on the Draft Housing Subsidies Order, 1956. In particular, he committed himself to a statement—as an interjection in an Opposition member's speech—"We are going to build about 300,000 [houses] this year again."

He was chiefly concerned, however, to rebut the charge that the rate of building, by local authorities had fallen catastrophically. He cited the number of tenders approved as the earliest and most up to date indication of local authority intentions, and stated that in the first ten months of this year tenders for 92,000 council houses had been approved. This he compared with the 95,000 tenders approved in the first ten months of last year, that

is, before the authorities knew anything about the cut in subsidies that was coming.

These figures, he claimed, were conclusive proof that the changes made in subsidy rates a year ago had certainly not had the catastrophic effect that the Opposition had predicted. There had, of course, been a major switch in house building away from houses for general need and towards the provision of houses for slum clearance. But that was what had been intended, to give a special stimulus to slum clearance. And on slum clearance he declared that things are getting pretty well, the drive was steadily gathering momentum; in 1955 local authorities submitted schemes covering rather more than 20,000 houses, the schemes submitted this year would be more than double that number. The Government had set themselves a target of rehousing people from the slums at the rate of 200,000 a year. Judging from the way things were going it would not be long before the target was reached.

The order which the Minister submitted abolishes with one exception the general needs subsidy for houses and flats, and applies to dwellings other than those for which tender were accepted by councils or submitted to a Minister before November 2. The exception is one-bedroom dwellings, which in the light of a recent survey Mr. Sandys thinks it desirable to encourage. Emphasizing that all the special purpose subsidies remain, Mr. Sandys explained that by a curious legal requirement even the general needs subsidy was retained—at a nominal rate of one shilling—for some houses, because the special subsidies were payable only as additions to a basic subsidy. He announced also that in the light of experience of the past year the Government had come to the conclusion that the transitional subsidy of £10 a year, introduced in October, 1955 to avoid a too abrupt termination of the general subsidy, could now be itself brought to an end without causing any undue embarrassment to local authorities. After some debate and dissention he got his Order by 275 votes to 241.

The Scottish counterpart to the English Minister's claim came in the form of an answer to three questions. In this the Secretary of State, Mr. Stuart, said that since August 1, 1956, tenders had been approved for 3,060 houses for which proposals were received before that date. These qualified for the existing rates of subsidy. In addition tenders had been approved for 5,039 houses, under proposals received since that date, and the authorities concerned had been informed that these houses would qualify for such subsidies as Parliament authorised to be paid for them on completion. Legislation to give effect to the new subsidy proposals announced on July 31 will be introduced shortly. (December 18.)

### Protecting Purchases

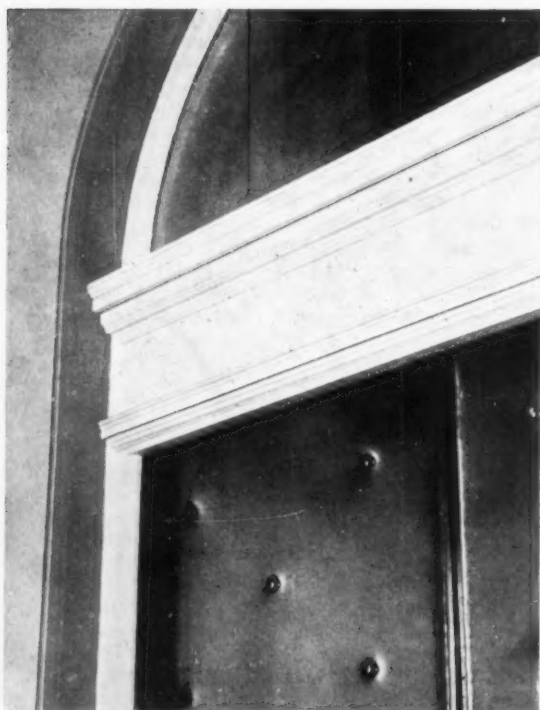
Mr. Gough asked the Minister of Housing and Local Government if he was satisfied with the National Housebuilders registration Council certificate as a means of protecting the interests of private house purchasers against sub-standard building; and whether he would be prepared to take steps to enforce the making good of all defects where such certificates had been issued in respect of houses falling below the minimum standards required?

Mr. Sandys replied that he was satisfied that the certificate issued by the National Housebuilders registration Council provided a valuable means of protecting house purchasers against jerry building. A purchaser who considered that the builder had not complied with the standards certified could, in the absence of agreement, submit the issue to arbitration. This was not a matter in which he had any power to intervene. (December 18.)





*The ante-room of the officers' mess, looking towards the new bar. Below, a detail of the leather padded doors*



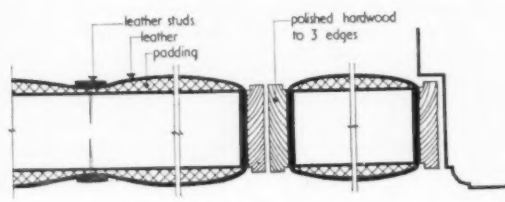
## **OFFICERS' MESS SANDHURST**

*Architects :*

**J. M. AUSTIN-SMITH & PARTNERS**

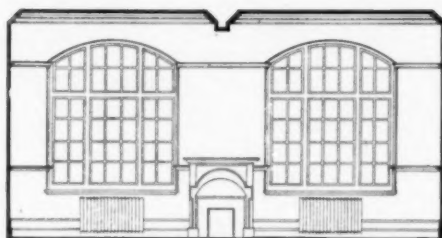
The Ante-room of the Officers' Mess at Victory College, Royal Military Academy, Sandhurst, has recently been refurnished in a contemporary manner. The Ante-room is in an old building; it used to be a high square Victorian room with an unattractive fire-place, doors with stained glass panels, clumsy light fittings and radiators, and a ugly dado rail running all round the room at shoulder height. The Army has not in the past been noted for its aesthetic sensibilities and

### **1/2 FULL SIZE DETAILS OF PADDED DOORS**

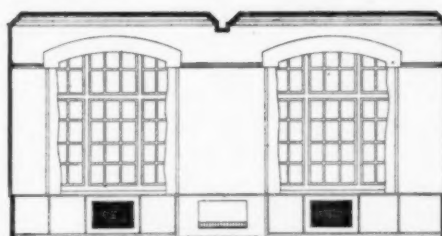




INTERIOR  
ELEVATIONS  
BEFORE  
CONVERSION



INTERIOR  
ELEVATIONS  
AFTER  
CONVERSION  
SCALE:  
1 IN = 10 FT



it is particularly welcome therefore to find such an improvement taking place.

Panelling was used to conceal the radiators and was carried right round the room at cill level. The paneling is Bubinga veneer, with solid timber of Gold Coast mahogany. The fireplace was completely altered and

given a slate surround. A fitted wall to wall carpet was provided—something quite new in furnishing an Army Mess. The doors were replaced with studded leather ones with reeded glass fanlights. Twelve prints were selected by the architects from the R.M.A. Museum and framed with coloured mounts.

*Another view of the ante-room, showing the new slate fireplace surround*





*The south front of the teaching block*

## **TULSE HILL L.C.C. SCHOOL**

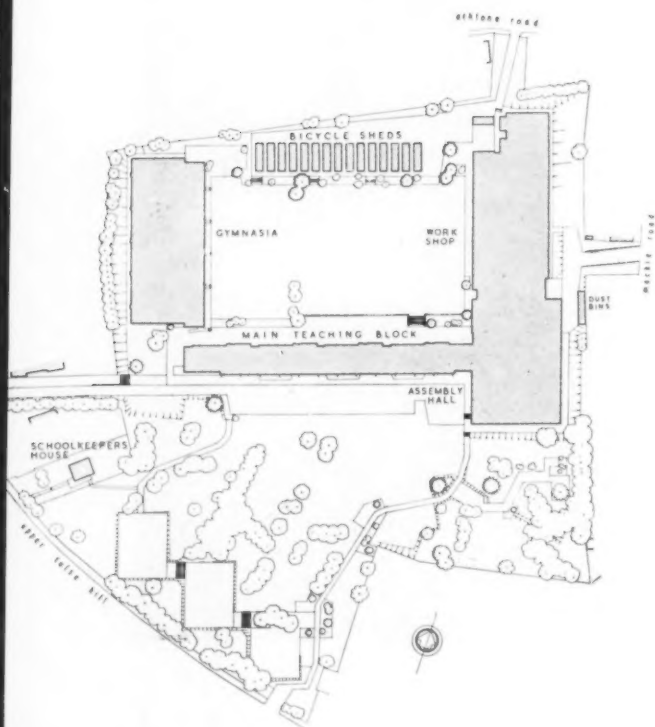
*Architect: J. L. MARTIN,  
former architect to the L.C.C.*

**T**HE L.C.C.'s new comprehensive school for 2,000 boys at Upper Tulse Hill, Lambeth, was designed by the former architect to the L.C.C., Dr. Leslie Martin. The site is 8.4 acres, part of which was formerly the playing fields of the Strand School.

It has a gentle slope to the north and many very fine trees which have been retained and incorporated in the layout of the new school.

As the site is some 3½ acres smaller than the Ministry of Education minimum regulation for schools of this size, the teaching accommodation has been planned in a nine-storey block and the maximum of open space preserved around the building. This nine-storey block contains most of the general teaching rooms, the library, art and pottery rooms, and all laboratories. There are four stair and lift towers (each lift large enough to carry a whole class), and the main circulation is on the vertical principle with horizontal communication corridors only on the 1st, 4th and 7th floors; great economy in floor area was achieved thereby.

The whole of the ground floor of the teaching block



is occupied by cloakrooms, lavatories, etc., other lavatories being disposed at each floor level.

The assembly hall will seat three-fifths of the school and adjoins the teaching block to the east, connected to it by a single-storey link. Dining will take place in this hall and the kitchen is on the north side of it. General staff and administration are also in this building.

The workshops are single-storey structures with north-lights, and are placed north of the assembly hall block.

Five gymnasia lie west of the main teaching block, again a single-storey structure and connected with the main block by a covered way.

Advantage has been taken of the unusual features of the site to dispose the buildings in the best possible way. Playgrounds are planned on different levels and the existing trees, together with turfing and fresh planting enhance the surroundings.

### Construction—Teaching Block

Construction is generally of reinforced concrete, making wide use of prefabrication. Spun concrete tubes are used as permanent shuttering to circular columns. There are specially designed precast T-section floor slabs, and prefabricated upstands at each floor level, formed of 3in woodwork set in a concrete frame with legs standing in slots in the edge beams.

Apart from the columns and main cross beams which occur at 23ft 4in centres the whole of the structural frame was precast on site and hoisted into position by tower crane.

Around the perimeter of each floor level are two concrete beams 6in apart and connected together with bolts and distance pieces. The exterior beam has threaded furrules cast into its face at 40in centres to receive the angle which supports the glass curtain walling. The internal beam is rebated to receive the floor

slabs. The reason for the two edge beams 6in apart was to allow access for heating and other services to the floor above.

All the services were preplanned and holes were cast in the beams for them, also "Philplugs" were cast in as grounds for various fixings.

The large measure of prefabrication adopted enabled a rate of erection to be achieved between three and four weeks per complete floor. The four stair and lift towers on the north side are *in situ* concrete faced with precast green "Mineralite" slabs and glass curtain walling, these towers being linked to the main frame at every floor level. The gable ends of 6in thick concrete are faced with Portland stone which continues as a frame at head and sill of the glass walling to teach elevation.

All internal partitions are of "Bellrock", prefabricated on site. One of the problems of a high building is the cleaning of windows; in this case a steel rail on which cradles can be hung has been fixed behind the stone facia to both elevations. Access to the rail and cradle is by trap-doors in the roof.

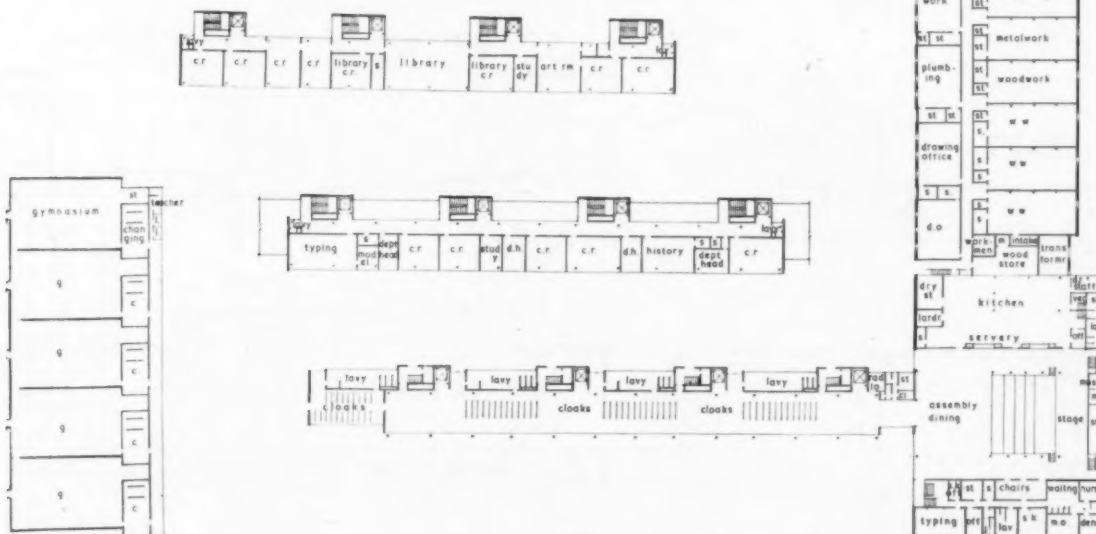
To facilitate the handling of precast members for this block several appliances were designed and manufactured, including a collapsible cradle for easy lifting of floor slabs by crane.

The glass curtain wall which forms the external skin to both north and south elevations is carried, storey by storey, on steel angles bolted back to the concrete edge beam. Where this curtain wall passes the upstand walls at each level colour has been introduced to add interest to the elevations. The white panels are "Hilsulate" panels simply glazed into the curtain wall, and the red panels are the painted faces of the upstand walls 4in behind the cladding faced with cast glass.

### Assembly Hall Block

The structure here is a conventional R.C. frame with

GROUND FLOOR PLAN AND FIRST & SECOND FLOORS OF TEACHING BLOCK SCALE 1 IN = 96 FT



## TULSE HILL SCHOOL

brick infill panels and the high portion of the hall itself is spanned by light welded steel trusses of 50ft span. Glazed areas are glass curtain walling similar to that used on the teaching block.

### Gymnasia Block

Cranked castellated steel beams span the full width of each gymnasium. These in turn support T-slabs of concrete similar to those used in the teaching block and the glazed curtain walling which lights these spaces from high level. The roof to the corridor is cantilevered from the main wall of the gymnasium and therefore the glass wall on the east side is simply an infill.

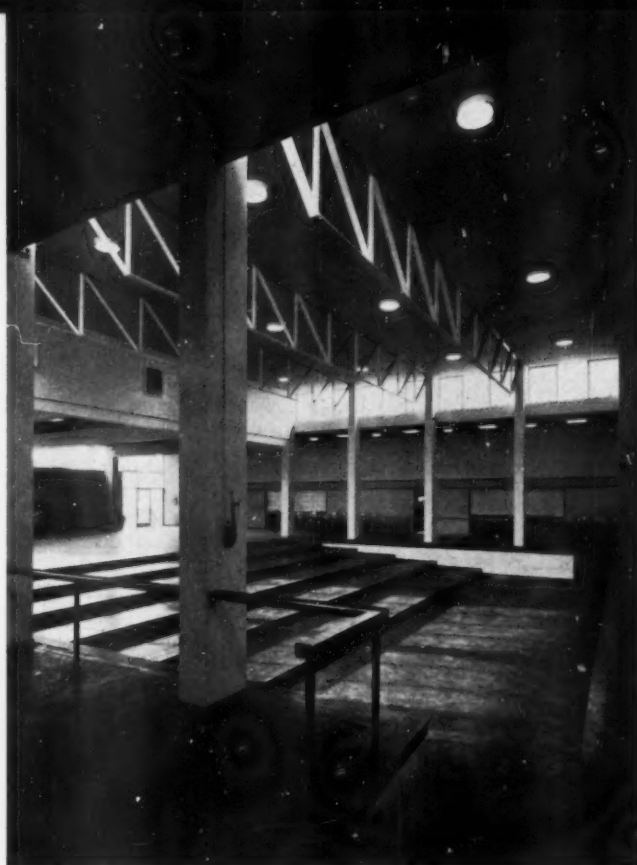
### Workshop Block

The construction is of precast concrete portal frames with concrete gutters and edgings. The roof is formed of light steel angles bolted to the concrete frames and supporting an asbestos covering, lined internally with fibreboard. The external walls are stock brickwork, and all internal walls left fairface are sand-limes.

### Finishes

Generally all teaching-room floors and corridors are finished in thermoplastic tiles, the library and general classrooms in cork tiles and the assembly hall in "Iroko" hardwood block. The woodwork shops are also finished in "Iroko" blocks, but the metalwork shops, where a hard floor is required, are floored with "Granwood" blocks. The floors of the gymnasias are semi-sprung and finished in maple strip. The staircases to the teaching block are floored throughout in "Iroko" hardwood. All the ceilings in the teaching block are  $\frac{3}{4}$ in fibreboard, suspended and secretly fixed to steel angles. All other ceilings are  $\frac{1}{2}$ in fibreboard fixed to timber battens, except the assembly hall high level ceiling which is hardboard and perforated hardboard with fibre-glass backing.

Walls generally are finished in emulsion paint, except



*The Assembly Hall*

staff rooms and certain features which have been wallpapered.

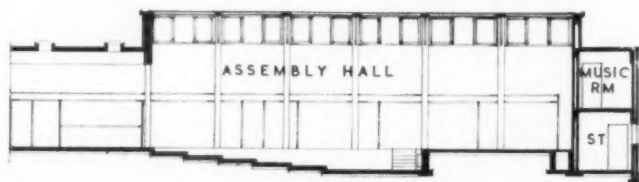
### Services

Heating is by low-pressure hot water from oil-fired boilers which are housed in the boiler room below the kitchen.

Generally pressed metal radiators are used, but in certain spaces hospital type radiators have had to be used. Staircases are heated by gilled tube coils fixed to the outer edge of each landing. The assembly hall is generally heated by pressed metal radiators on the



SECTION THROUGH WORKSHOP BLOCK



SECTIONS BOTH WAYS THROUGH ASSEMBLY HALL



SCALE: 1 IN = 2 FT





A photograph of the gymnasium

perimeter walls, with vectair heaters under the stage.

The workshops and gymnasias are heated by "Flexaire" unit heaters set in flush with the main face of the walls.

The assembly hall and kitchen have extract fans and all laboratories have mechanically ventilated fume cupboards.

Generally, use has been made of the standard pattern fittings, but where low ceilings occur recessed lights have been used. This applies also to the lecture rooms.

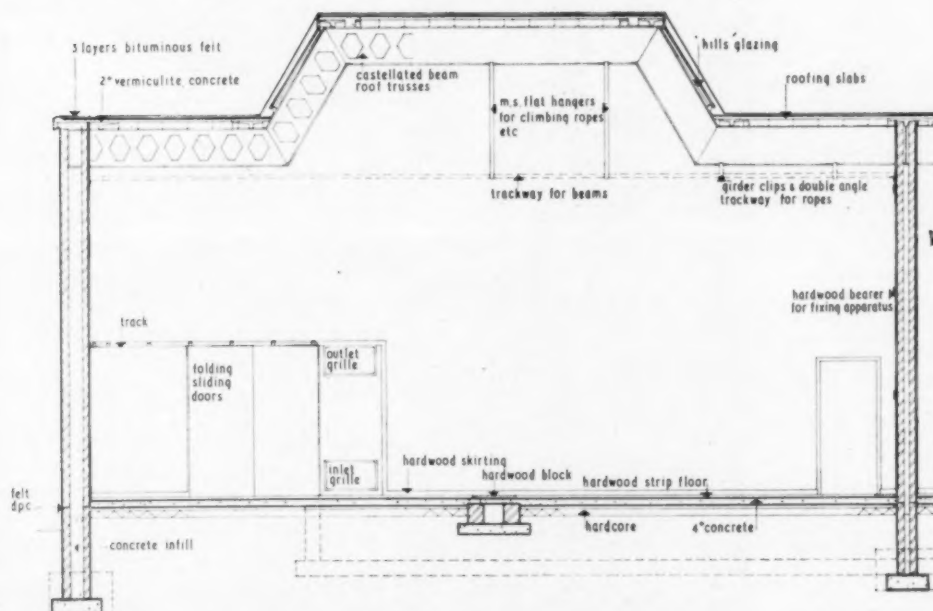
The assembly hall has recessed fittings in the thick-

ness of the roof which are capable of being relamped from outside on the roof.

Loudspeakers are fitted in each teaching space which can be used for broadcasts, class changing bell and fire alarm. Also the Head Master can address each class from his own room. At salient points throughout the building a "speak back" instrument is fitted for staff use.

The cost of the school was £608,275, plus £53,358 for furniture and equipment. The net cost per place was £239.

*Continued overleaf*



SECTION  
THROUGH  
GYMNASIUM  
SCALE:  
1 IN = 8 FT

## TULSE HILL SCHOOL

### Architects :

J. L. MARTIN, former Architect to the L.C.C.  
F. G. WEST, Deputy Architect.  
The late S. HOWARD,  
former Schools Architect.  
G. F. HORSFALL, M.B.E.,  
Assistant Schools Architect.  
J. M. KIDALL, Architect-in-Charge.

### Consultants :

Structure—J. H. HUMPHREYS,  
Senior Structural Engineer, L.C.C.  
Heating and Electrical—J. RAWLINSON,  
C.B.E., Chief Engineer to the L.C.C.  
Landscape—L. A. HUDDART, Chief Officer  
of the L.C.C. Parks Department.

### Quantity Surveyors :

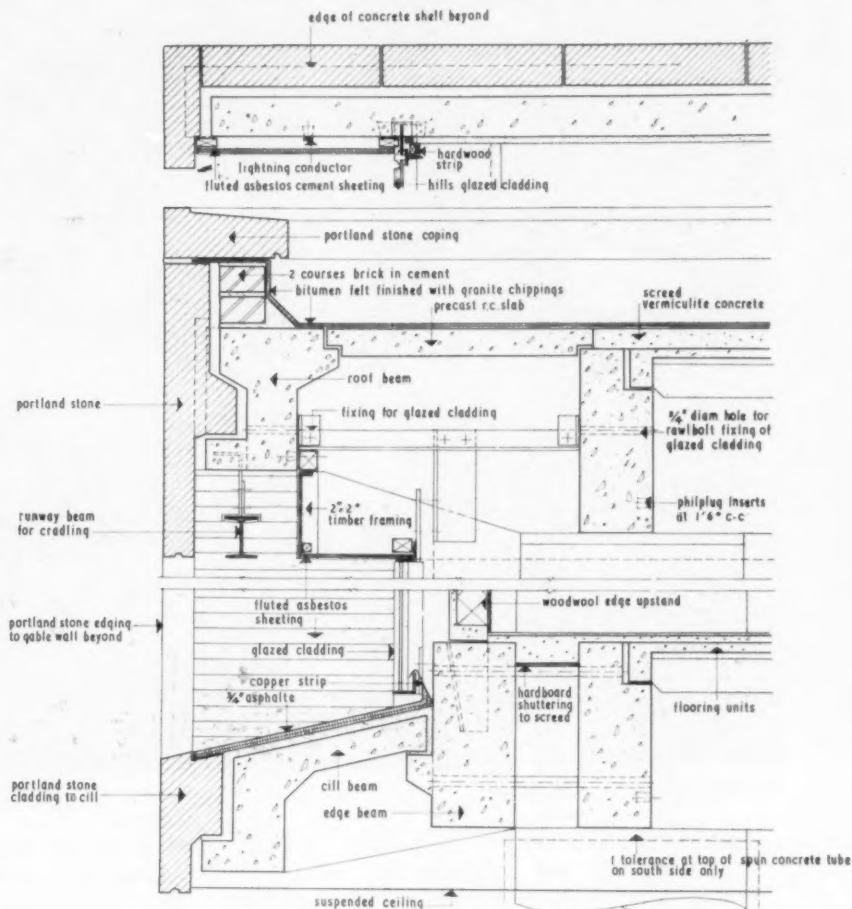
Bills of Quantities prepared by  
H. H. B. STEWART & CO.

### General Contractors :

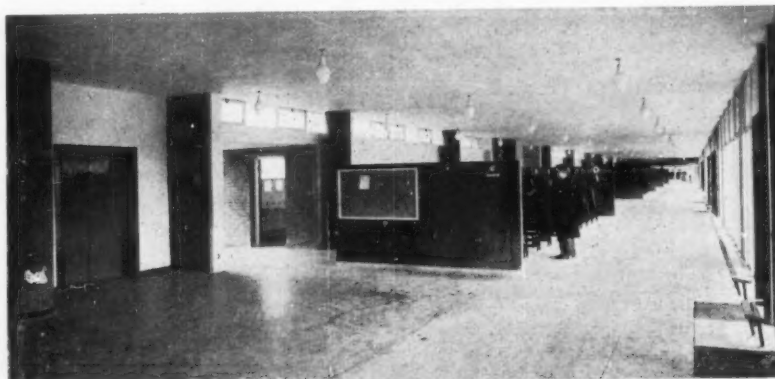
LESLIE & CO. LTD.—Foundations.  
RUSH & TOMPKINS, LTD.—Superstructure.

### Sub-contractors :

Balustrading : R. Smith (Horley) Ltd. Ceilings (Suspended) : Anderson Construction Co. Ltd. Cladding Slabs : Kendall's Stone & Paving Co. Ltd. Concrete Tubes (Spun) : Spun Concrete Ltd. Doors in Fume Cupboard (Sliding) : Quicktho & Co. Ltd. Electrical Installation : H. J. Cash & Co. Ltd. Fencing (Chain-link and Hairpin) : Bayliss Jones & Bayliss Co. Ltd. Fire Resisting Door to Fuel Store : Durasteel Ltd. Floors (Wood Block and Strip) : Vigers Bros. Ltd. ; Granwood Flooring Co. Ltd. Flooring Slabs : Fabricrete Ltd. Gates (Entrance) : R. Smith (Horley) Ltd. Glass Panels and Dome Lights : Hills (West Bromwich) Ltd. Heating and Ventilation : Norris Warming Co. Ltd. Ironmongery : Lockerbie & Wilkinson Ltd.. Joinery : C. Plowman Ltd. Kitchen Hood (Glazed) : Norris Warming Co. Ltd. Lettering (Plastic) : Applied Lettering. Lifts : Hammond & Champness. Lighting Conductors : Blackburn, Starling Co. Ltd. Painting : Weldec (Decorators) Co. Ltd. Paving (Tar) : A. C. W. Hobman & Co. Ltd. Piling : The Cementation Co. Ltd. Plastering : Plastering Ltd. Plumbing : Thorp Bros. Ltd. Reconstructed Stonework : Kendall's Stone & Paving Co. Ltd. Roofing (Asbestos Cement) : John Denyer Ltd. Roofing Felt : Rock Asphalt Co. Ltd. Runway Beams and Hangers : Scaffolding (Great Britain) Ltd. Sanitary Fittings : Stitsons Sanitary Fittings Ltd. Shutters (Roller) : G. Brady & Co. Ltd. Steel Beams : The United Steel Structural Co. Ltd. Stone Cladding : Bath & Portland Stone Firms Ltd. Tanks (Water Storage) : Mather & Platt Ltd. Tanking (Felt) : Ragusa Asphalt Co. Ltd. Terrazzo : The Mosaic & Terrazzo Precast Co. Ltd. Tiles (Cork Floor) : Sementex Ltd. ; (Decorative Wall) : Carter & Co. (London) Ltd. Tiling (Floor and Wall) : Parkinsons (Wall Tiling) Ltd.



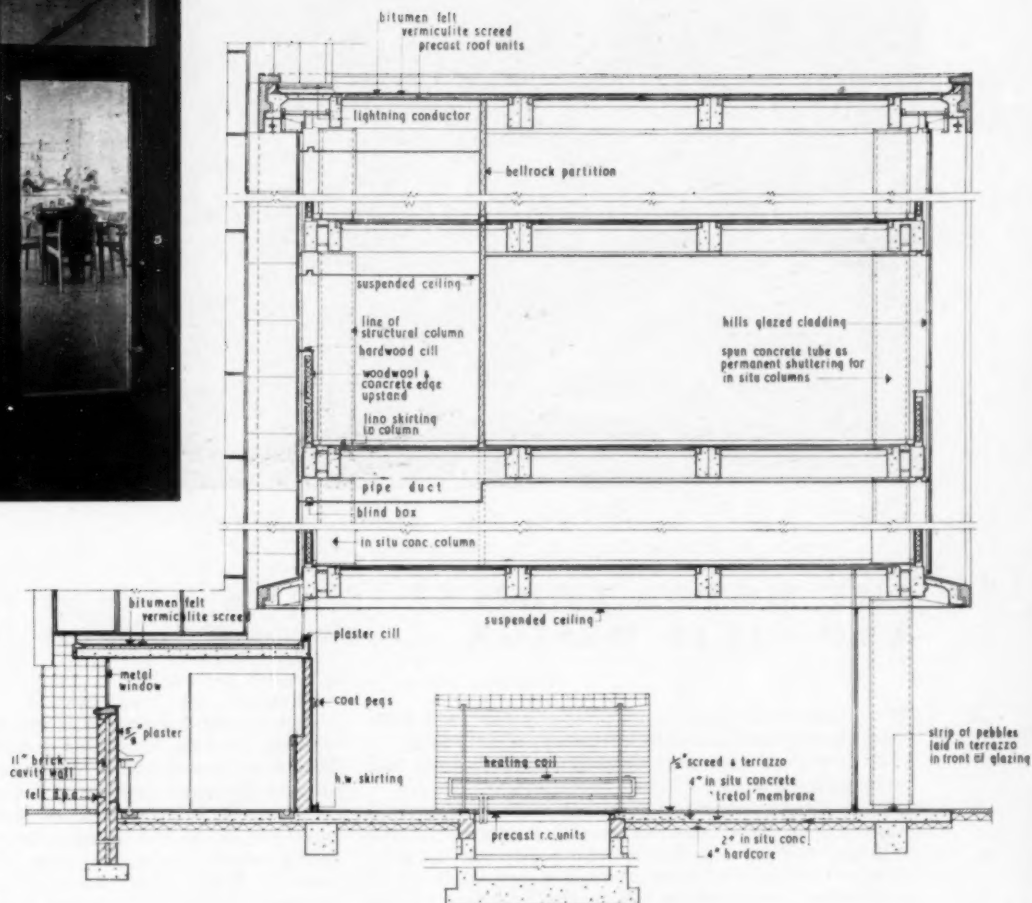
PLAN & SECTIONS, TEACHING BLOCK, 1/16 th F.S.



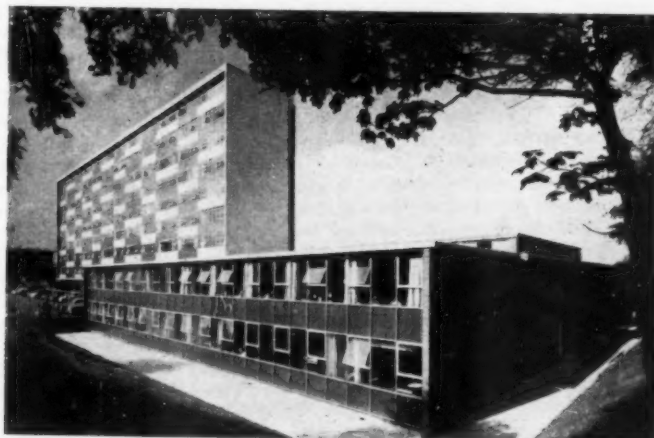


RIGHT,  
SECTION  
THROUGH  
TEACHING  
BLOCK

SCALE :  
1 IN = 8 FT



Facing page, top, a view of the ground floor of the 9-storey teaching block showing the entrance and cloakrooms. Below, the access way through to the Assembly Hall. This page, top, a view into the library in the teaching block. Right, a general view of the south front of the school, and a photograph of the deputy-headmaster's room







Aerial view of the Pentagon, Washington, with its car parks and access roads

## THE MOTOR VEHICLE AND CIVIC DESIGN

*Points from the Paper read at the R.I.B.A. on  
December 11, by Professor MYLES WRIGHT*

**T**HE title of this paper is not quite a correct description of its contents. It should have been called "the motor vehicle's probable influence on future town planning and building development".

Starting from the assumption that motor vehicles will become much more numerous than they now are, it tries to show that they will influence both the location and form of new building development much more radically than most official plans assume. It is also held that we can foresee a good deal about the influences that will tend to resist them, and the detailed forms of layout and new building which far more numerous motor vehicles will tend to bring into existence.

In short I shall tonight try to describe a coming battle. But for this to be worth while we must agree that there is going to be a battle, and I hope that agreement will reach as far as that—despite Suez. When vehicles on the roads have been increasing at round about half a million a year, have doubled in numbers since before the war and will probably double again within 10 or 12 years—in these circumstances we can hardly say the motor vehicle problem has crept up on us. Yet the all-round convenience of the motor vehicle for those who can manage to use one still seems to be doubted to the extent of pooh-poohing any big efforts to provide for its more convenient use. And of course the present difficulties over oil from the Near East provide a useful, though surely temporary, additional argument for those who deny that Britain is entering the motor age in a big way. I believe we can deny it no longer. A motor car—1956—has been rightly called a pair of seven-leagued boots, a raincoat, a shopping basket, mobile office and even a makeshift week-end cottage; always at one's disposal for as little as 3d a mile all in, and with virtually no breakdowns. In the difficult world of the middle class it is one of the few really good things: if you can use it. I am sure that all who can will and that the social revolution, churning on, will make cars as plentiful among wage earners as television sets.

The commercial vehicle is not quite so advantageous because, on long hauls, the restriction to 20 m.p.h. in Britain deprives the truck of one of its great advantages. On the Continent and the U.S.A. 30- and 40-ton loads travel at 50 m.p.h. And on short hauls loading and unloading points are so often congested. At Manchester docks, vehicles wait an average of one hour and three-quarters before they can unload. Nevertheless the residual advantage is so great that nearly three-quarters of all goods by value now move by road. This includes much bulk goods. R.I.B.A. members will be familiar with an advertisement saying that the London Brick Co. Ltd. moved last year by road 881 million bricks and their vehicles travelled 21 million miles.

It follows that organized bulk transport, human or other, along fixed routes, is declining and individual small unit any-direction transport is increasing. This is made only too plain by the financial difficulties of the railways and the drop in the passengers carried by London Transport and other bus companies.

### **Cars need more space and encourage dispersion**

In order to be used efficiently, however, motor vehicles need space to move, to unload and for storage when unused. This and one other rather obvious fact summarize between them the coming struggle. A large part of our largest towns was built in Victorian times, in railway and horse-and-cart times, and the buildings cluster closely around railways and docks. Up to the first war, the buildings and the people were pinned down, close in, by the need for the short haul and a short journey to work. The jobs and the population were in the big towns. In the last 25 years there has been a great change. Largely by means of the motor vehicle, dwellings have fanned out around most towns, especially larger towns. To a smaller extent employment has also moved out, but chiefly dwellings.

Two forces have been at work which nourished each



other. One was a widespread demand by the urban population for more elbow room; for houses and gardens, school playing fields and much else. The other was the motor vehicle's need for space. The two forces together produced the well-known sprawl. The jobs, however, to a very large extent remained in the big towns. Nearly all who could afford it have escaped as far as the chain of the daily journey allows. The edge of one sprawl touches the next in certain places and we have the conurbations. The six conurbations of England and Wales contain 40 per cent of the population; about 8 million jobs. The sprawl has not been halted since the war though we intended to do so. This is shown by the plots of new dwellings built in and near London and Birmingham since the war.

#### **Planned overspill of two million**

In the last two years we have, I think, reached a new stage in the battle between the forces making for dispersal and those which favour continued concentration of people and jobs in and very near the larger cities. Motor vehicles have become available for all who can pay for them, we cannot postpone much longer the construction of special motor roads, and we have decided to pay much more attention to slum clearance. It is this last resolve, if it is really a resolve, that will compel us to examine dispersal much more searchingly and to take more determined and controversial action than we have so far. Forty-three per cent of the dwellings in Liverpool were found unfit for habitation by the Macmillan survey. At least 370,000 need clearing in the larger towns of the six conurbations. The amount of overspill of population that will be needed if central districts are to be rebuilt to modern standards of space has varied in different calculations. The Permanent Secretary of the Ministry of Housing and Local Government has recently accepted a figure of about two million people. As she has said, in terms of new dwellings needed outside the big towns, it is not at all an impossible air: 500,000 or 700,000 new dwellings.

In all other ways, to move two million people out of the big towns—right out of them and not merely to their edges—is likely to be very difficult indeed. It even seems to be so difficult that we have not got to the point of looking at it rightly. Two million people moved means the creation, in these days, of nearly one million new jobs outside the big towns; and, of course, the closing down of one million jobs in the big towns.

Put this way we can understand why the big cities are tackling the problem more formally, or at least more dutifully, than enthusiastically. Liverpool's overspill, for example, is put at 150,000. Liverpool thus has in theory to encourage the removal of 70,000 jobs and to take steps to see they are not recreated again in the city. It must be prepared to buy up the sites of the factories or other employments that move to prevent their being used again for the same purpose. But Liverpool is in a Development Area, a district that is held to need added employment, and 470 or more new factories and extensions have been licensed on Merseyside since the war. Liverpool may accept the fact that if its central districts are to be properly rebuilt 150,000 will have to move out. To announce that 75,000, or even 50,000 jobs are to be closed down, would be much less acceptable.

#### **New pattern of industry**

I suggest that the most far-sighted, energetic and wealthy firms and people will probably decentralize themselves. The coming motor roads and atomic power stations, in conjunction with the electricity grid, television and teleprinters will form a frame on which a new motorized industrial and office-working aristocracy will build their own settlements, somewhere near a motorway and perhaps 50 miles from both London or 25 from Birmingham. It

seems surprising that more land and property companies have not thought already of shopping and office estates like the imaginary Cressington or the real shopping centre at Wilmslow near Manchester that opened a few weeks ago. I am sure that some developments of this kind will be proposed directly we have our first motorways. To live, say, in Northampton and work in such a new centre, halfway between A5 and A6 and not far from A1, might well be to have Britain at your command in a motorized age and as pleasant surroundings as a reasonable person could wish for.

But unorganized private decentralizations of this type would probably give very little help to the big overspill problem. They would be too small in scale and too few.

At the present moment, at the outset of the new battle between dispersal and continued concentration, the Ministry and the big cities are at odds with each other. The Minister is disturbed at the new offices springing up in central London and also wants the big cities to put green belts round themselves and to arrange for their own overspills. But he will not apparently consent to any more new towns being started. A big city, on the other hand, looks with lack of enthusiasm at the prospect, when money is very tight, of bribing some other local authority to take some of its population and employment and of then having to buy the site vacated by the employment. And if a family moving from the big city has been living in a privately owned house, there may be nothing to stop another family moving into that same house next day. So the big city may subsidize the receiving authority for ten years for nothing at all.

#### **Danger of decay in city centres**

Yet the slums are there and they cannot be rebuilt unless half a million or so families move out of the big cities. Traffic congestion is also with us and is increasing fast. There are powerful forces making for dispersal and also powerful forces making for continued concentration. In these circumstances development is taking the form one would expect in this huge pull-Devil-pull-baker game. There is more or less random expansion on the outskirts of the big cities and as much central flat building as public opinion will stand. Outside London, the danger of decay of the inner portions of the Victorian cities seems to me very real. Liverpool has more than 700 empty offices in its central districts.

If the great provincial cities are to prosper in the motor age they must surely have a great deal of money spent on them, mainly to open them up to motor traffic. Unless a car can run right into the central business district, or a lorry run right into the docks or industrial districts, and get away again over unobstructed roads, the prosperity of the city will certainly decline. All who can will move out. To ensure unobstructed access to central districts will require urban motor ways running above or below local roads when they come near the centre. I do not think we can say that we cannot afford these. Holland, Belgium, Germany and other countries have built or are about to build urban motorways and they are a commonplace of American cities. If big cities are to prosper in a motor age they cannot do without such roads.

The motorways will make a great difference to the appearance of our cities but not necessarily for the worse. Their scale is very large but they can also be very fine to look at. They will be the 20th-century equivalents of the Victorian railway viaducts and cuttings, and they will require skilful design by men trained in traffic engineering, of whom we have too few. They will be the new skeleton of the town. I see no reason why they should tend to cut up the town into sectors, provided they are sunk or raised. It is a major traffic route at ground level that severs one neighbourhood from another.

## THE MOTOR VEHICLE AND CIVIC DESIGN

I believe a big city should not fear the cost. If necessary the motorways may be made toll roads. Few motorists, jammed in Moorgate or Oxford Street, would grudge a shilling to be wafted to the Barnet Bypass. As one who lives on the far side of the Mersey Tunnel, I find that great work has two great advantages. It offers an enormous saving of time over the old ferries and it makes one consider (grinding one's teeth) whether one really needs the car and whether two trips could not be combined into one.

Toll roads however require toll gates and a large "stacking up" space. Otherwise the queues of vehicles at peak hours will block approach roads.

### Satellites

If room for urban motorways and their space-consuming approaches is to be found in the central districts, overspill, as now estimated, would be somewhat increased. At the same time, if the town has been given a new lease of life by the construction of the motorways, the export of jobs may become more difficult. I see no prospect of getting over this difficulty within, say, 20 years except by the creation of satellite towns fairly close to the exporting city. These satellites should be placed near a motorway, and if possible a railway line serving the exporting city, and should concentrate to begin with on the provision of jobs. Each would be an industrial estate, office centre and, so far as possible, a shopping centre laid out for a motor age. It would aim to draw out workers from the parent city. In the early stages workers would travel out daily, thus helping local transport companies to balance their rush-hour traffic and their budgets. Houses would follow, either in the new town or in adjoining existing small towns.

This brings us to the problem of how far the satellite should be from the parent city. It is too complicated to examine fully here. In brief I believe that many employments and people will be willing to move a little way out of their home town but unwilling to go right away. The alternatives are not therefore long-distance decentralization *versus* satellites, but continued random sprawl *versus* the satellites: a very different matter. Allowing for a green belt and faster travel by motorways, a distance of 10 to 15 miles seems most suitable for a provincial city.

### A Satellite for London

One may also point out that a new town containing jobs and not people would seem to have great possibilities for London. It might be placed, for example, just outside the green belt among the northern new towns, near trunk roads 5, 6 and 1. The Minister has said he is very worried about the rush of new office building in central London. A new centre for up to 50,000 office workers on the outskirts would help to balance the inward flow of workers, would be extremely well placed for motorists and could hardly fail to be profitable. This kind of thing has already happened in the United States.

The broad proposal for overspill is therefore that plans should be based on drawing some firms and people out to the neighbourhood of "motor age" employment centres 10 or 15 miles away, and on the recasting of the exporting city to provide as well as possible for motor vehicles. This will cost a great deal of money but the city that does it well is likely to score very heavily over those that do not. The eventual aim is a city on a regional scale—whatever local authority boundaries may be. There would be one set of advantages for firms in the central city, another for those in a satellite. But there would be close connections

between the two. A single firm might well be split, with directors in the centre and the hundreds of young ladies working calculating machines in the satellite town, ten minutes from the tennis club. Most of the advantages of large cities would be retained: the large labour force, local market, local skills; but the jobs and the population would come to be regrouped in two divisions: a larger one in the exporting city and a smaller, fully motorized one 10 to 15 miles away in two, three or four, satellites.

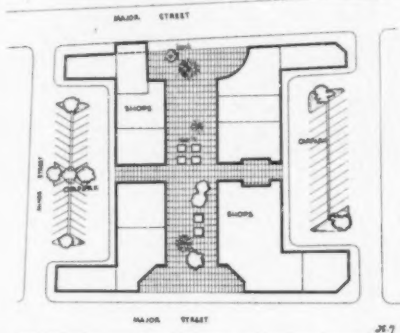
I think we must accept that much bigger changes will be needed than city plans now usually contemplate; and this quite apart from urban motorways.

Both in the U.S.A. and on the Continent main ground level routes are now planned as *motor traffic* routes, not as streets down which motor traffic is allowed to pass as one among several other uses of it.

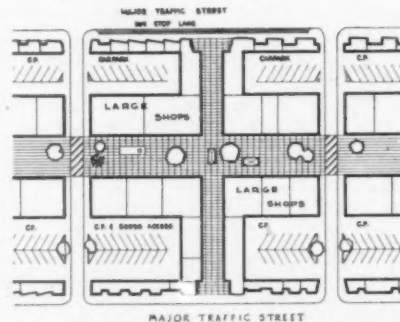
One can drive from Idlewild Airport to Central Manhattan at 40 to 50 m.p.h. without any check at all save for one toll bar—comparable with a journey from London Airport to Piccadilly. I repeat: no lights, no check at all.

When one turns to the central area itself we shall have to accept gradual changes in the arrangement and form of streets and buildings. I suggest it is possible to forecast some of the new forms that will be tried and probably accepted.

In all these, separation of vehicles and pedestrians will be the main aim, or one of the two main aims—the other being provision for parking of vehicles.



The only solution is to create islands into which one tries to draw pedestrians and vehicles that want to unload or park. The figure above shows a simple arrangement of this kind. A pedestrian way has been cut through between two major streets. Big shops are in the centre, small shops on the major streets and car parking and access for goods vehicles are off the side streets. There are, of course, quite a number of arrangements of this kind now in existence. For example, both at Coventry and at Rotterdam "island-ing" has begun.

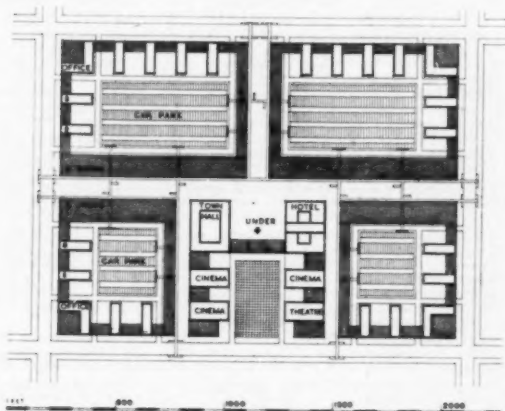


This figure shows an extension of the same idea. Three street blocks have been turned inside out, as it were.

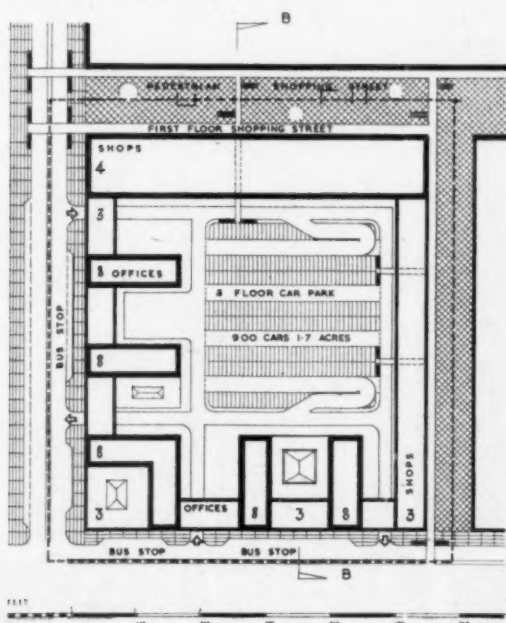
The major shopping street is now pedestrian. No stopping at all would be allowed in the traffic street save by buses in the special bay. In most provincial cities such a ban would abolish congestion and delay save at peak travel hours, and would reduce it then.

The preceding slides have shown possibilities of gradual small-scale change, block by block. What are the chances of a big change: the creation of a kind of motorized central area?

There are undoubtedly great advantages in a big scheme. The amount and quality of accommodation, the convenience and publicity value of a 50-acre scheme, carried out as one project, would far exceed the total offered by 20 scattered redevelopments of equal total acreage.



Above, diagrammatically, is one such scheme covering 65 acres. It would contain enough room for 30,000 workers and visitors and 6,000 cars. Its shops and offices would contain not far short of half the floor space now in use for those purposes in the central area of Liverpool. It would be a super-Coventry, entirely pedestrian. Below is a detail. There would be two floors of shop windows and entrances, the upper being approached by the over-bridges. Once one had arrived in the Centre it would be almost impossible to be run over. A city that carried out a project of this kind with sufficient energy and boldness might achieve a great success.



But we must not underrate the traffic problem, especially the peak hour traffic problem if the whole nation is to remain of one mind on one point: that it is going to stop work between 5 and 6 p.m. If we assume that 7,500 people try to leave in the fashionable hour in 5,000 cars (leaving, say, 17,000 to go by bus) it is certain that they would not be able to do it. A reasonable guess is that it would take two hours to clear the car parks.

Things would be improved if the project were extended to include neighbouring land, and to provide tunnel access to the car parks from some distance away and also a bus station where buses could stack up and load quickly at the rush hour.

The project thus becomes very large and would probably not allow more than about a quarter of the workers and visitors to drive to and from the centre. But that does not mean it would not be worth while. My own view is that if a big city carried out a large scheme of this kind it might reinvigorate its central area and make it very attractive to offices and shops for a long period ahead.

We have to remember that a fully motorized central area in a big city—over half a million population—is an impossibility. The great advantage of being in a town centre is proximity to other traders and professions, to exchanges and telecommunications: to be on the spot, in the know. As more motor vehicles are used, demanding room for their storage and movement, the people are inevitably pushed further and further apart. We have made some studies at Liverpool of how much further. It is clear that it is a great deal further directly the ratio of cars to workers becomes over one car to five people. The trouble occurs not when the vehicles are at rest, but when many of them try to move at the same time. To avoid congestion in rush hours much land is needed for approach and dispersal routes.

If one demands an unchecked run in, easy parking, a more or less unchecked run out and a vehicle/people ratio of one to two or thereabouts, it is clear what the end must be. Here it is. The Pentagon at Washington, its car parks and approaches.

It is contended that for British cities—and here I am thinking mainly of the large provincial cities—our aim should be a very great improvement of vehicular access to the centres, and some fully "motorized" satellite towns not too far away. The whole would be a balanced city on the regional scale. There would be one set of advantages in the centre (and one car parking space for every five or seven people) and other advantages in the fully "motorized" satellites. The architectural and engineering problems are very great. They seem to demand more attention.

## Discussion

Colin D. Buchanan, in proposing the vote of thanks, strongly supported Professor Myles Wright's arguments: he spoke of the infestation of central urban areas by motor traffic, and he reinforced Professor Myles Wright's plea for segregation, particularly vertical segregation of traffic from pedestrians. He considered that pedestrians were the cream of town users: first consideration should be given to them above all.

R. T. Kennedy, seconding the vote, put forward a powerful case against the drastic modification of cities to accommodate motor traffic—visually and socially as well as economically the objections are severe. He maintained that the cost of motorways and the cost of parking cars at the centres of towns was unreasonable. The great engineering achievements of the Victorian railway builders took place on ground that was not already heavily committed and cluttered with services, and in an intellectual atmosphere more receptive to change and progress.



**M. of W. LECTURES***January, 1957, Programme*

- **CAMBRIDGE**—Some Notable Concrete Buildings, Tuesday, January 8, at 7.30 p.m. Speaker: R. C. Blyth, M.A.(Cantab.), M.I.C.E., M.I.Struct.E., F.I.P.H.E., Cement and Concrete Association, at Matthews Cafe, Trinity Street.
- **LIVERPOOL**—Waste Plumbing and Building Drainage Fundamentals, Thursday, January 10, at 7.15 p.m. Speaker: E. H. W. Gunton, M.I.P.H.E., Sanitary Engineer, Ministry of Works, at the Lecture Hall, College of Technology, Byrom Street.
- **WILLESDEN**—Preservative Treatment Against Wood Borers, Monday, January 14, at 7.0 p.m. Speaker: Claude Sisley, F.R.E.S., of Cuprinol Ltd., at Willesden Technical College, Denzil Road, N.W.10.
- **BURTON-ON-TRENT**—The Building (Safety, Health and Welfare) Regulations 1948, Tuesday, January 15, at 7.15 p.m. Speaker: An Officer of the Inspectorate of the Factories Department, Ministry of Labour and National Service, at the New Technical College, Manor Croft.
- **DONCASTER**—Safety in the Building Industry, Tuesday, January 15, at 7.15 p.m. Speaker: J. A. Hayward, Superintending Safety Officer, John Laing & Son Ltd., at the Technical College, St. George Gate.
- **NEWCASTLE-UPON-TYNE**—Plaster and Plastering, Tuesday, January 15, at 7.0 p.m. Speaker: J. F. Tonner, Sales Director, Carlisle Plaster & Cement Co., in the Lecture Theatre, Chemistry Building, King's College, Victoria Road.
- **SOUTHEND**—Essentials of Good Concrete, Tuesday, January 15, at 7.30 p.m. Speaker: E. E. H. Bate, C.B.E., M.C., B.Sc., M.I.C.E., Chief Works Engineer, Ministry of Works, at the Municipal College, Victoria Circus.
- **BRADFORD**—Recent Developments in Prestressed Concrete, Wednesday, January 16, at 7.15 p.m. Speaker: S. C. C. Bate, B.Sc.(Eng.), Ph.D., A.M.I.C.E., Building Research Station of the Department of Scientific and Industrial Research, at the Technical College, Great Horton Lane.
- **NOTTINGHAM**—Modern Painting and Decorating, Wednesday, January 16, at 7.15 p.m. Speaker: J. W. Wilson, Paint and Colour Consultant, at the Technical College, Shakespeare Street.
- **STOKE-ON-TRENT**—Arbitration and Awards, Wednesday, January 16, at 7.15 p.m. Speaker: John J. Clarke, M.A., F.S.S., L.M.T.P.I., of Gray's Inn, Barrister-at-Law, at the Building Department, North Staffs Technical College, Cauldon Place.
- **CHATHAM**—An Introduction to Prestressed Concrete, Thursday, January 17, at 7.15 p.m. Speaker: R. C. Blyth, M.A.(Cantab.), M.I.C.E., M.I.Struct.E., F.I.P.H.E., Cement and Concrete Association, at Medway School of Technology, Maidstone Road.
- **EDINBURGH**—The Application of Soil Mechanics in the Design of Foundations, Thursday, January 17, at 7.15 p.m. Speaker: H. B. Sutherland, S.M. (Harvard), A.M.I.C.E., at the North British Hotel.
- **EAST HAM**—The Weathering and Deterioration of Concrete and Cement Renderings, Thursday, January 17, at 7.0 p.m. Speaker: C. Hobbs, B.Sc., A.R.I.C., Development Division, John Laing & Son Ltd., at East Ham Technical College, Department of Building, Arragon Road, E.6.
- **GRANTHAM**—Field Maintenance of Builders' Plant, Monday, January 21, at 7.15 p.m. Speaker: J. Stafford, George Wimpey & Co. Ltd., at the Technical College, Avenue Road.
- **WIGAN**—Dampness in Buildings, Monday, January 21, at 7.30 p.m. Speaker: J. P. Latham, A.M.I.Struct.E., M.I.E.I., Building Research Station of the Department of Scientific and Industrial Research, at Wigan and District Mining and Technical College, Library Street.
- **LEICESTER**—Control of Concrete Quality on Sites, Tuesday, January 22, at 7.15 p.m. Speaker: R. A. Kenny, Development Division, John Laing & Son Ltd., at the College of Art and Technology, The Newark.
- **SOUTHAMPTON**—Modern Paints and Painting Practice, Tuesday, January 22, at 7.30 p.m. Speaker: B. Butler, Director, Leyland Paint and Varnish Co. Ltd., at Southampton Technical College, Albert Road.
- **SOUTH SHIELDS**—Defects in Brickwork, Tuesday, January 22, at 7.0 p.m. Speaker: L. W. Baldwin, Building Research Station of the Department of Scientific and Industrial Research, at South Shields Marine and Technical College, St. George's Avenue.
- **ABERYSTWYTH**—Problems of Plastering and Rendering, Tuesday, January 22, at 7.0 p.m. Speaker: E. L. Westbrook, Research Development Officer, Edwin H. Bradley & Son Ltd., Swindon, at the Cambrian Hall, Council Offices.
- **MILFORD HAVEN**—Problems of Plastering and Rendering, Wednesday, January 23, at 7.0 p.m. Speaker: E. L. Westbrook, Research Development Officer, Edwin H. Bradley & Son Ltd., Swindon, at the Trafalgar Institute, Charles Street.
- **BIRMINGHAM**—The Economics of Multi-Storey Flats Design, Wednesday, January 23, at 7.15 p.m. Speaker: C. N. Craig, M.A., A.R.I.B.A., Building Research Station of the Department of Scientific and Industrial Research, at the Ministry of Works Building, Ashley Street, off Bristol Street.
- **NORWICH**—Sound Practice in the Use of Wood in Building, Wednesday, January 23, at 7.30 p.m. Speaker: P. L. Money, Deputy Director, Timber Development Association, at the Art School, St. George Street.
- **SHEFFIELD**—Safety in the Building Industry, Thursday, January 24, at 7.15 p.m. Speaker: J. A. Hayward, Superintending Safety Officer, John Laing & Son Ltd., at the College of Technology, Building Department, Salmon Pastures, Warren Street.
- **SWANSEA**—Corrosion of Metals in Building, Thursday, January 24, at 7.0 p.m. Speaker: J. I. M. Lewis, M.Sc., A.R.I.C., Development Division, John Laing & Son Ltd., in the Lecture Hall, Central Library.
- **WALSALL**—Sound Practice in the Use of Wood in Building, Thursday, January 24, at 7.15 p.m. Speaker: B. Alwyn Jay, M.A., F.I.S., Deputy Director, Timber Development Association, at Walsall Technical College, Wisemore.
- **ALDERSHOT**—Good Practice in Domestic Drainage, Tuesday, January 29, at 7.15 p.m. Speaker: F. J. Crabb, B.Eng., M.I.C.E., F.R.S.H., at Manor Park Secondary Modern School, Manor Walk, St. Michael's Road.
- **BOLTON**—Roof Condensation in Factories, Tuesday, January 29, at 7.15 p.m. Speaker: A. W. Pratt, B.Sc., M.Sc.(Tech.), A.Inst.P., Building Research Station of the Department of Scientific and Industrial Research, at Bolton Technical College.
- **MIDDLESBROUGH**—Foundation Problems, Tuesday, January 29, at 7.0 p.m. Speaker: N. H. Buchi, B.Sc.(Eng.), A.M.I.C.E., of Tarslag Ltd., at Cleveland Scientific and Technical Institute.
- **WALTHAMSTOW**—Rights of Third Parties, Wednesday, January 30, at 7.15 p.m. Speaker: John J. Clarke, M.A., F.S.S., L.M.T.P.I., of Gray's Inn, Barrister-at-Law, at South West Essex Technical College, Forest Road, E.17.
- **WOLVERHAMPTON**—Pipes and Pipe Laying, Wednesday, January 30, at 7.15 p.m. Speaker: N. W. B. Clarke, M.Eng., M.I.C.E., M.I.Struct.E., A.M.I.W.E., Building Research Station of the Department of Scientific and Industrial Research, at Wolverhampton and Staffordshire Technical College, Wulfruna Street.
- **DERBY**—Arbitration in Building Disputes, Thursday, January 31, at 7.15 p.m. Speaker: Norman P. Greig, B.A., Barrister-at-Law, F.I.Arb., Hon.F.I.Q.S., F.R.S.H., at the College of Art, Green Lane.

New shops and flats now in building at Newington Causeway near the Elephant and Castle. Architect: K. W. Bland, A.R.I.B.A. Consulting Engineers: W. V. Zinn & Associates. General Contractors: Wates Ltd.





## Kitchen Planning

**W**HAT a strange variety of subjects one is asked by one's editor to listen to at the Royal Society of Arts. Home safety and modular co-ordination in one week and kitchen planning in the following one, and none of these subjects would be particularly associated with the Arts in the minds of many. Attendance at the last seemed as if it might have a real educational value as I am greatly in favour of applying science in the kitchen if it means reducing the burden on the housewife (and her husband) but I am very strongly opposed to too great an application of science to the food itself. Therefore I looked forward with great interest to the two papers read by Mrs. Mildred Wheatcroft, the Chairman of the Research Committee of the Council Scientific Management in the Home and Miss Joan E. Walley, Head of the Household Science Department, Queen Elizabeth College, London University.

### Kitchens That "Just Happen"

Unfortunately these papers put forward very little which was new to a competent architect who has studied at all the needs of domestic planning and, in fact, they had some unnecessary "cracks" at architects whom they ought to be wooing to achieve their desires. They seemed to have the somewhat false belief that architects are responsible for the design of all domestic kitchens; it may be that some are designed by engineers and some by builders or perhaps they just happen as architects well know. The papers omitted to draw attention to the very considerable difficulties which are encountered in trying to achieve satisfactory kitchen plans with ideal arrangements at cost within the price range which public authorities, owners and tenants feel they can afford. There are so many factors which architects have to consider when planning houses that they tend to prevent the achievement of ideal arrangements in any one room.

None the less it is always good to know what the experts think would be ideal if it could be arranged within the given budget. A fundamental difficulty, particularly in Local Authority housing and in the lower priced private enterprise houses, is that of cost as it affects areas available, the

need for the maximum economy and, particularly, in the extent of fixed equipment. There are also such problems as the need to provide in kitchens for laundry facilities and other household operations which would be better performed in other places if the money permitted the additional space.

### Washing-up the Machine

After listening to these papers it seemed that there are certain matters which science applied to the kitchen does not achieve, if the word "Planning" is interpreted more widely than merely the arrangement of fittings on a plan. If science could be used to solve some of the more real problems even the less good kitchen plans would cause less inconvenience to the housewife. For example, many would like to see those who research into kitchen matters find a simple and inexpensive means of washing-up with the minimum of time and labour, especially the cleaning of such articles as dishes used for roasting meat and saucepans in which porridge has dried to the sides, and whatever the devices evolved they should be such that they do not themselves require more washing up after coping with china, glass, cutlery and utensils. There are also appliances, such as mixers, which take nearly as much effort to clean after their use as is needed to do the basic job with a simple spoon, fork or whisk. Perhaps also the kitchen scientists can produce a toaster which is self-adjusting to the moisture content of the bread and does not work on time alone.

### Telescopic Table Tops

Mrs. Wheatcroft said that it is estimated that an average of four hours is spent daily in each household solely on the tasks of preparing and serving meals, clearing away and washing up. This would seem to be a very high average when it is realised that there are many whose meals amount to making tea and toast for breakfast and cooking an evening meal. Mrs. Wheatcroft also made reference to the fact that the standard of living could be improved if productivity of labour in factories was increased and the same object could also be achieved by increasing the efficiency and productivity of house-

wives. She suggested that time should not be wasted on unnecessary steps, although she advocated larger kitchens, and much back-ache could be avoided by fixing working surfaces at the correct height for the individual worker. Is it really possible to conceive the idea that the greater proportion of our homes, which are merely rented, should have the heights of their kitchen fittings changed (at the landlords' expense) each time the tenant changes? In any case the back-aches which Mrs. Wheatcroft wishes to avoid will in many cases be increased if working heights are dropped from the now usual 3ft to the 2ft 8 or 9in that she advocated. What in fact can there be except a compromise in heights when, to take my own case alone, the housewife is 5ft 2in and the daily woman 6ft 2in but both have to use the same kitchen equipment for approximately the same time each day? The cost of quickly adjustable fittings to suit each user would be impossible. I have been assured by a number of short women that after working with low heights and with 3ft they prefer to have a constant height for all working surfaces in the room at least 3ft with the addition of a normal and lower height kitchen table at which to sit for the few operations that can be done or are worthwhile doing because of their longer duration in this position.

### Research on "Elevenness"

In the research work described by Mrs. Wheatcroft it seemed as if the observations might well have been made under conditions which are hardly normal and possibly did not take sufficient account of the other duties which fall on the housewife as interruptions to kitchen work; nor do they take account of interruptions such as shopping or "grandma" or a neighbour calling and staying for two hours to chat and drink cups of tea.

Mrs. Wheatcroft suggested that there are five main groups of activities which go on in a kitchen. The first of these is the preparation of food, its cooking, serving and dish-washing. The second group are activities connected with laundry work to which she adds the observation "there is an argument for taking all this out of the kitchen, but this is not the custom at present". Surely it is "the custom" because those responsible for buying or renting or for financing our rented houses are not prepared to meet the extra costs which such more hygienic

## Kitchen Planning

planning would involve. The third group are termed "minor activities" and cover food preservation, shoe cleaning, silver and brass cleaning, doing the flowers, washing the dog and many similar tasks. Her fourth group are "family activities" for which, in so many houses, the kitchen is the best and only place in which to "make a mess". Her last group, but surely the most important to many, especially the children, is the eating of meals.

While there are many who want or are at least willing to eat the less formal meals or to feed young children in the kitchen there are others who feel that meals merit their consumption outside the kitchen, even if this must mean a great deal more work and walking for the housewife. It seems therefore most houses as they are designed for the unknown occupier must make eating possible in either place.

### Drudgery at the Sink

From a B.R.S. investigation it is suggested that of the housewife's whole working day 29 per cent of her working time was spent at the sink and the work-top beside it and that the cooker was the next place of importance to the sink. This would seem to show a need for the application of science to reduce this 29 per cent, only little reduction of which will be achieved by altering the lay-out of the sink.

It is interesting to note that the evidence obtained in another inquiry showed that most working housewives (are there any non-working housewives today?) want a larder even if they have a refrigerator. This might not be true if the refrigerator could be sufficiently large but, unless I have forgotten my Building By-laws, houses have to be provided with a larder whether or not a refrigerator is available. What was not brought out is that the larder wants to be a cool place and not a cupboard with thin walls having little insulation value and wants to be without a cooker at its side and hot pipes running through it. It is equally interesting to note that the evidence showed, as I have always believed, the Ministry of Housing recommendation for the size of a larder at "not less than 4 sq. ft in town dwellings" is quite inadequate to satisfy most housewives.

### Round Cooks for Square Kitchens

On the size, shape and aspect of kitchens Mrs. Wheatcroft said that housewives do not like a kitchen which is very small because she spends about 70 per cent of her working time there yet she suggested that a kitchen as small as "at least 100 sq ft seems to be required if some meals are to be taken in it and at least 130 sq ft if it is also to be the main place for meals". If money were no object it is probable that the housewives would, in spite of the extra walking, prefer rooms of sizes much larger than those proposed, which are already larger than the M.o.H. suggest. She suggested that the kitchen should be rectangular rather than completely square in shape and then suggested dimensions of 12ft x 8ft or 9ft x 11ft. The advantages of the rectangular shape are that the working area may be at one end, with the doors, circulation space and table for meals at the other end. Although aspect was in the title of this paragraph no mention was made of its importance. Mrs. Wheatcroft suggested that there should be wall space for a movable kitchen table and that it is better if the table is not in the middle of the room, but gave no worth-while reason. She also suggested, as surely we all know, that a trolley "has much to recommend it for serving meals in other rooms", but she omitted to suggest that space is needed in the kitchen for it to stand.

### What Size is Your Cheese Grater?

Miss Walley's contribution was mainly to show some very attractive pictures of a number of American and Swedish kitchens which are not generally applicable to the British way of life since most of us in this country are not prepared to, or cannot, spend the very high cost involved. Miss Walley brought out the fact that an American Research Department has prepared a scheme of kitchen arrangement which had an overall area of 176 sq ft, an area which if acceptable in this country could assure us of much better kitchen planning, while still later in her paper she showed another having 315 sq ft (more than one-third of a M.o.H. three-bedroom house area) and so many gadgets that the cost of the kitchen would probably be as great or greater than we expect to pay for a whole house. She also discussed briefly the matter of storage on which she appeared to have some

impracticable ideas. She said that cupboards, drawers and shelves and other storage devices should all be carefully planned to accommodate the utensils and equipment to be stored in them. While this is generally agreed does Miss Walley realize that almost every household into which one goes has different things, in type and quantity, and a somewhat different way of living to be accommodated? How then can storage be precisely designed to suit the needs of the future occupiers who are quite unknown?

### What Shape is Your Housewife?

One of the noticeable things in these papers was a complete absence of reference to where in the plan to fix the tin-opener and of what type it best should be, which needs scientific research and seems to be a terrible omission from a discussion on modern kitchen planning as this implement must, in so many of to-day's kitchens, be the mainstay of the cook's equipment and work of preparation of meals, if one can judge correctly by the proportion of display space in food shops devoted to tinned food. I was very surprised also to find no reference was made in the general trials and researches described to the making of a proper anthropometric study of the housewives, from the results of which questions such as the average height for the various working surfaces could be settled finally and properly; these heights must be average heights if we are to install, as indeed we must, mass-produced kitchen equipment based on the needs of unknown housewives. The other point on which it would have been interesting to have information is the extent of the time devoted to actual preparation and cooking of food rather than to the associated duties, such as washing-up, and the extent to which tin-opening and frozen and ready-prepared foods have reduced the time required for preparation of meals. There are many households where there are no children whose cooking, perhaps unfortunately, amounts to the mere preparation of one meal a day consisting of tinned fruit juice, ready-cooked breakfast cereals, toast, shop marmalade and coffee requiring no more than a dining table on which to place a percolator and a toaster and thus eliminating the need for more than the barest minimum of kitchen equipment to handle the very rare preparation of a "real meal", such as a Christmas dinner.

DUTCH UNCLE

## Timber Notes

**M**OVEDS are now being made in the softwood trade to settle the basis for business next year. Negotiations are opening with the shippers for supplies early next summer, and an offer of up to 100,000 standards—which is a large proposition—has been made by Russia for 1957 shipment. The prices asked are still based on £94 a standard c.i.f. for unsorted redwood 7in battens, which is the price asked throughout this year by the Russians. The prices of whitewood and fourths have been altered, the changes mainly showing an increase of up to £2 a standard on the last list, but this will mean that the timber will still be offered cheaper than it was in the early part of 1956.

It will be noted that these are the prices at British ports, and the Russians will be meeting the higher freight charges which must surely be applicable by next summer. Already freight rates are higher than they have ever been, and they are still going up. Timber importers are expecting that softwood prices next year will be seriously affected by the rising freight market, and it is already certain that the small drop in the price of logs in some of the supply countries will be more than outweighed by higher costs of transporting the lumber to the mills and to this country, not to mention the higher wages payable in overseas mills.

If the Russian offer can be taken as a hint for the 1957 market, then it would appear that softwood prices will rise only slightly. Contractors will notice that there is little chance of a reduction, which makes the present price of softwood attractive for the building trade.

Most importers and merchants are still seriously handicapped by lack of capital, and the credit squeeze has affected their trade. Selling remains important if bank overdrafts are to be reduced in time to secure facilities for fresh buying, so conditions are favourable for the purchaser, especially where extended credit is not required.

### Softwood stocks

Stocks of softwood in the country are ample for a diminishing demand, particularly as the building trade requirements are expected to be lower in 1957. There is a general opinion in the trade that stocks can safely be reduced still more, but in the meantime the builders can rest assured that their needs will be met. Selling of the Government softwood stock is still continuing, but this is making slow progress because the Board of Trade will not accept the low tenders presented by most merchants.

### Hardwood

In the hardwood trade the stock position remains good, but the forward contract position is unhealthy. Lack of demand has discouraged

importers from fresh buying, and the Suez dispute has hampered deliveries of hardwoods from the Far East, not to mention that prices will have to go up to cover the higher freight costs. All the Government strategic stock of American oak has now been sold. It is doubtful whether the prices now being asked for most hardwoods will be repeated in 1957; a gradual rise is almost inevitable with increasing costs.

### Plywood

The plywood trade is right at the bottom of the market, and prices here must certainly rise in the future. Russian birch is a good 25 to 30 per cent cheaper than in 1955, and Finnish plywood is more than 20 per cent cheaper. No further fall has taken place, except that the Russians have sold more birch plywood at over 30 per cent down on the 1955 price list. Sales of Canadian fir plywood are increasing in the building trade, both for concrete work and for decorative purposes.

### Fibreboard

The fibreboard trade is well stocked with most types of board and prices are now much steadier. Some buying has taken place for next year, with just a small increase in many cases. Home production is expanding considerably, and there should be no difficulty in obtaining suitable stocks of hardboard, insulation board and chipboard.

## Industrial Notes

- The Plasterboard Industry announces that the Gypsum Building Products Association has been dissolved and a new association known as the Gypsum Plasterboard Development Association has been formed to take over its activities.

- Dunlop Nigerian Plantation Co. has launched a £3½ million scheme for the production of natural rubber. About 20,000 acres have been acquired around Akampa in Eastern Nigeria and clearing and planting has already commenced. It is hoped that the first 10,000 acres, when in maturity, will produce about 4,000 tons of latex and 1,250 tons of dry scrap annually.

- J. H. Fenner (Holdings) announce that profits for the year ended August 31, were £428,096. This shows an increase of £20,182 on the results of the previous twelve months. Dividend is held at 12½ per cent.

- The telephone number of the Building Research Station at Garston, Watford has been changed and is now Garston (Herts) 4040.

- The South Durham Iron & Steel Co. are paying a final dividend of 5 per cent (total for year 8 per cent). Trading profit for the year ended September 29 was £3,222,817 against £2,754,717 for previous twelve months.

- The United Steel Companies announce a final dividend of 8½ per cent for the year ended September 30. This maintains the years' total at 12½ per cent.

- Mr. Fred Evans has been elected a director of Nu-Way Heating Plants Ltd., the Droitwich manufacturers of oil-burning equipment.

*Girder connector walks forty storeys above New York's 42nd Street*





## NEW PRODUCTS

*In this feature are reviewed new lines introduced to the building industry for the first time and additions or improvements to existing ones. Any advantages claimed for a product are from information supplied by the manufacturer*

The new Redfyre, domestic diesel oil burning, water heater. Fig. 1, incorporates a water storage cylinder as an integral part of the appliance. Fabricated from stainless steel, it can be supplied with alternative water storage capacities of 22 and 33 gallons. Alternative controls are available, ranging from simple manual type to a completely automatic installation with electric ignition. Thermostatic control may be fitted if desired. Maximum and minimum output and consumption figures are, respectively, 20,000 to 5,000 B.Th.U./hr and 1.5 to 0.3 pts/hr.

Newton, Chambers & Co. Ltd, Light Castings Dept., Thorncliffe, Sheffield. Ecclesfield 3171.

This new solid fuel burning inset convector fire, the County Converta, Fig. 2, will fit existing fireplaces of 16in width by 22in or 24in height. It requires a total height of 23 or 25in on the face of the grate and for the larger height an extension louvre must be used. It is specially designed for use with existing brick backs and cannot be used with backboiler units. Available in stone or fawn mottles and grey, green, copper or pewter lustre finishes.

Whymans Foundry Co. Ltd., Warrington, Lancs. Warrington 1164.

"Exolit Exsud Firestop" is a new fireproofing compound which may be applied as a surface coating to insulation and acoustic boards. It has been tested by the Joint Fire Research Organisation and placed in category Class I (very low flame-

spread) under B.S.S. 476. Full details are obtainable from the sales organisation of this company.

South American Minerals & Products Co. Ltd., 26/7 Cowcross Street, London, E.C.1. Clerkenwell 2101.

This firm claim that after extensive research, they are now able to treat their paints in such a manner as to impart to them the property of uniting firmly to damp surfaces, when applied by brush. The proprietary brands so treated will be marked "Hydro Treated" in addition to the normal label. They are prepared to give a practical demonstration to interested parties.

Dixon's Paints Ltd., Albion Wharf, Bok, London, E.3. Advance 2504.

Hurseal Ltd. have produced a new single-sided towel rail which will fit any of their panel radiators, 26in long. Finished in chromium plate, with open ends, the rail simply clamps over the top of the radiator.

Hurseal Ltd., 229 Regent Street, London, W.1. Regent 1051.

Peglers Ltd. announce the introduction of all gunmetal "Prestex" joints for copper and plastic tubes. Besides the body of the joint, the coupling unit is made of gunmetal and the fitting complies with B.S.864 and is suitable for B.S.659 copper tube and plastic tubes to B.S.1372. The range includes 1/4in to 1in fittings in all the popular patterns and delivery can be made from stock.

Peglers Ltd., Prestex House, Marshalsea Rd., London, S.E.1. Hop 2461.

This firm announce that they are adopting the bi-pin cap as standard on all "Atlas" fluorescent tubes and that, although existing types of fittings will remain unchanged, all future ones will be designed to take bi-pin tubes. An adaptor will be available so that bi-pin tubes may be used in any fittings. Fig. 4 shows the "Atlas" bi-pin lampholder which incorporates a heavily loaded spring for maintaining firm grip and positive contact.

Thorn Electrical Industries Ltd., 105-109 Judd Street, London, W.C.1 Euston 4433.

A new addition to their range of rubber-clad cable couplers is announced by this firm. It is a 2amp 3-pin connection, Fig. 3, which dispenses with the fold-over lip sealing the two portions together and is replaced by a push-on fit. When coupled together with cable, a partial vacuum



is created in the body and medium pressure needs to be exerted to break the connection.

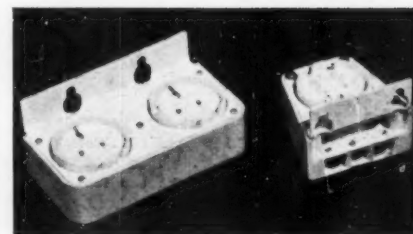
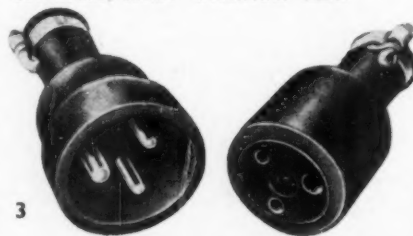
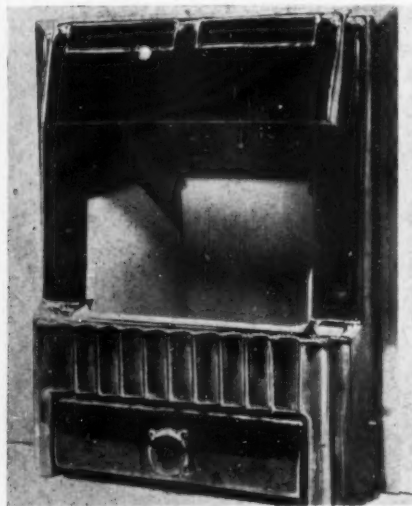
Nettle Accessories Ltd., Harper Road, Wythenshawe, Manchester, 22. Wythenshawe 4321.

Shearwater panels are claimed to provide a light but stable internal partition and to possess fire and sound resisting properties. They consist of two plaster wallboards between which is sandwiched Dufaylite honeycomb paper. Timber is fitted at top and bottom to facilitate fixing. Standard sizes are 2in or 2 1/2in thick by 7ft 6in, 8ft and 9ft long by 1ft to 4ft wide.

Shearwater Ltd., Ditton Road, Widnes, Lancashire. Widnes 2073.

Rigid vinyl stairnosing is a recent addition to this firm's range of products. It is available in black, pewter, bronze and deep bronze and is offered in lengths of 3ft and 6ft. The recommended fixing medium is Marley M.8 adhesive. It costs about 1s per foot and makers claim it to be the lowest priced stairnosing on the market.

Marley Tile Co. Ltd., Riverhead, Sevenoaks, Kent. Sevenoaks 2251.





# CURRENT MARKET PRICES (LONDON)

(These prices apply to material purchased in the quantities named or otherwise as might be expected for a new building of moderate size.)

17th December, 1956

## AGGREGATES AND SAND

1½ in—all in—ballast	25/-	Yard cube delivered (in five yard loads or more)
¾ in do.	27/-	
¾ in screened shingle	22/6	
¾ in do.	23/6	
¾ in granite chippings	53/-	
Sharp washed sand	25/6	
Pit sand	23/3	
Building sand	23/3	
Broken brick	21/-	
1½ in shingle	21/6	
Cartage of muck	9/3	

## BUILDING MATERIALS AS DESCRIBED, CENTRAL LONDON

CEMENTS packed in paper bags	Per ton
Portland in 6ton lots	104/6
Do., from 1ton to 5ton 19cwt do.	116/6
Do., Rapid hardening (6ton lots)	115/-
Do. (but 1ton to 5ton 19cwt)	127/-
Cement "Aquacrete" (do.)	149/-
Do., "417" or "Polar" (do.)	149/-
Do., "White" 1ton (lots)	265/-

LIME—	132/- (1ton loads) deliv'd
Hydrated .. including ..	129/6 (2/3 do.) do.
Grey .. bags	119/6 (4/5 do.) do.
White Lime 7/6 extra per ton	

## PLASTER—

Keenes, coarse, pink (2ton lots)	219/6 ton
Do. do. white (do.)	225/- do.
Sirapite, do. (2ton to 3ton 19cwt lots)	158/3 do.
Do. finish (do.)	166/3 do.
Hardwall, do. (do.)	169/9 do.
Plaster, coarse, pink (do.)	156/6 do.
Do. do. white (do.)	166/- do.
in Gypsum Plaster Lath (600sq yds)	2/4 sq yd
Do. do. Wallboard do.	2/7 do.
¾ in Jute scrim (100yd roll)	9/2 each
Cow hair (under 3cwt)	97/6 cwt

## FIRECLAY—

Stourbridge, loose (1ton lots)	176/9ton delivered
Fire cement	12/3 14lb

## BRICKS

### BACKING BRICKS (in truck loads)—

Flettons	115/- per 1,000 delivered
Do. Keyed	117/- do.
Do. bullnose	145/- do.
Blue wirecuts	530/6 do.
White	197/- do.
Southwater engineering (No. 1)	382/- do.
Firebricks—2½ in	77/- per 100 delivered
Do. —3 in	90/9 do.

## STOCK BRICKS—

Mild stocks	181/6 per 1,000 at Works
Second, do.	236/- do.
First, do.	257/- do.
Add for delivery—approx. 50/- per 1,000 in lorry loads	

## FACINGS (ex truck or lorry)—

Rustics	145/- per 1,000 delivered
White	220/- do.
Blue pressed, 2½ in	587/- do.
Do. bullnose	601/- do.
Reds (Multi sand faced)	320/- do.
White glazed stretchers	1600/- do.
Do. headers	1575/- do.
Do. bullnose	2000/- do.
Do. double stretchers	2125/- do.
Do. double headers	1937/6 do.
Breeze fixing bricks	32/- per 100
Fire tiles and lumps	33/- ft cube
Wall ties—8 in by ½ in by ¾ in, black	85/- per cwt
Cement mortar (1 : 3) hand-made	93/6 yd cube

## BRICKLAYERS' SUNDRIES—

AIR BRICKS	9 by 3in	9 by 6in	9 by 9in	12 by 9in
Iron .. each	2/1	3/5	5/2	6/10
Galvanised do. do.	3/9	6/-	9/-	12/-
Terra Cotta do.	1/3	2/7	5/6	10/10
Chimney pots, Terra Cotta (11 to 25)do.	1ft 7/7	2ft 13/4	3ft 30/3	4ft 51/5

## PARTITIONS—

18 in by 9 in Blocks keyed for plastering				
Per yd super in 6ton lots	2in	2½ in	3in	
In solid clinker including any half blocks	3/9	4/4	5/3	
In cellular clinker blocks	3/11	4/7	5/3	
In hollow clay blocks	4/5	4/8	5/5	

Clinker blocks in small quantity .. 5/7 6/7 7/11  
Intermediate quantities in all types may be had at intermediate prices.

Smooth in lieu of keyed faces extra cost per side 3d. per yd super

## SINKS—

Fireclay white glazed in and out—standard quality	24 by 18in	30 by 18in	30 by 20in
London pattern, no overflow,			
6in deep	69/6	86/6	96/-
Belfast, plain edge, 10in deep	83/3	137/6	185/6

## FLUE, LININGS, PLAIN, CIRCULAR (FIRECLAY)—

	Foot lineal	Each Bends
9in diameter	4/2	12/6
10in do.	5/3	15/9
12in do.	10/-	30/-
9in diameter, beaded end, 12in high		5/7

## FLUE PIPES AND FITTINGS—

	4in	5in	6in
Heavy asbestos type, 6ft length	16/6	22/-	28/-
Do. 3ft length	8/3	11/-	14/-
Do. bends	6/2	7/10	9/4
Light asbestos type, 6ft lengths	13/6	17/-	22/-
Do. 3ft length	6/9	8/6	11/-
Bends	4/10	6/1	7/5
Baffler	13/4	15/10	16/8

## DRAINAGE GOODS

### GLAZED STONEWARE STANDARD LIST

	4in	6in	9in
ORDINARY TYPE—EACH			
Pipes in 2ft lengths	3/4	5/-	9/-
Bends	5/-	7/6	20/3
Junctions (4in on 4in, 6 in on 6in, 9in on 9in)	8/4	12/6	27/-
Gullies with 4in outlets	12/6	13/9	22/6
4in horizontal inlets	4/-	6/-	10/-
4in vertical do.	6/-	9/-	15/-
Black iron grids	1/6	2/10	5/6

### Adjustment to Current Cost

	2ton lots or more	Less than 2ton lots
"Best" pipes and fittings.	100 pieces or more	Under 100 pieces
Percentages to add	-7½%	+8½% +15%
Further percentages to be independently added in respect of :		
British Standard pipes, etc., 10. "Best" Tested pipes, 37½.		
British Standard Tested, 47½.		

## IRON DRAINAGE GOODS—

	4in	6in
Each		
Cast iron pipes, 9ft long	75/3	110/9
Do. 6ft do.	54/-	83/10
Do. 4ft do.	41/7	64/10
Do. 2ft do.	25/5	38/5
Short bend	17/6	46/3
Junction	31/-	64/8

## CURRENT MARKET PRICES (Continued)

## DRAINAGE GOODS—Continued

GULLEY PARTS—		4in	6in	
Traps, high level, invert	.. ..	31/-	84/-	each
Inlet, bellmouth pattern	.. ..	16/5	32/-	do.
Do. with one vertical branch	.. ..	28/6	53/5	do.
Do. with two do.	.. ..	77/2	113/3	do.
Extra for Sealed cover	.. ..	9/11	12/8	do.

## RAINWATER SHOES

	4in	6in	
With vertical inlet and rebated top	40/7	80/9	each
Extension piece, 6in high	21/5	21/5	do.
Flat loose coated grating	4/3	4/3	do.
Loose solid coated cover	5/7	5/7	do.

## MANHOLE CHANNELS, WHITE GLAZED—

Each	4in	6in	9in
Straight, 2ft long	16/6	24/3	40/9
Taper, do.	27/6	27/6	41/9
Bends, main, half section	32/-	46/3	76/-
Do., branch, do.	19/9	27/6	—
Do., do. three quarters, do.	27/6	44/-	—
Junctions, single	26/6	46/3	—
Do., double	36/3	62/9	—

## BROWN GLAZED CHANNELS—

Based on standard list (less than 100 pieces)

	4in	6in	9in
Half-round main channel (2ft long)	2/9	4/2	7/4
Extra for stop ends	2/9	4/2	7/4
Extra for outlets	5/5	8/2	—
Channel bends with splayed ends	8/2	12/3	—
Three-quarter section do.	10/10	16/4	—

## MANHOLE COVERS—

	Black
24 by 18in Light foot traffic	30/- each
Do. Strong do.	53/6 do.
Do. Light car traffic	107/- do.
Do. Road traffic	160/- do.

## SUNDRIES—

	Galvanised
Manhole steps	8/6 each
4in Mica valve fresh air inlets	14/6 do.
Plumber's hemp	7/3 per lb
Gaskin, caulking	1/5½ do.
Canvas backed hair felt, 4in wide	9d per ft run

## ROOFING MATERIALS

## WELSH SLATES (delivered)—

Sizes in inches	Full Loads	Quantity 100 to 499	1 to 99
22 by 11	2070/-	280/-	37/-
20 by 10	1839/-	250/6	33/-
18 by 10	1287/-	173/6	23/-
16 by 10	1020/-	138/-	18/3
14 by 9	670/-	95/9	12/9
14 by 4½	335/-	42/9	5/9

## TILES (Brosley and Staffordshire)—

	per 1,000	per 100
10½in by 6½in Machine made	330/-	40/-
Do., hand made, sand faced	406/-	49/-
Hips, valleys and angles	33/- per dozen	—
Plain concrete tiles	177/-	19/6

Sheeting asbestos corrugated, 6in pitch	7/4½ yd super
4½in by 16 gauge, drive screws (galvanised)	17/9 gross
7½in by ¾ hook bolts and nuts (do.)	51/6 do.
Washers, round, flat galvanised	4/9 do.
Do. do. bituminous	2/- do.

## ROOFING FELT—

Sanded bitumen felt (55lb)	1/- yd super
Do., but 75lb in weight	1/6 do.
Inodorous felt, best quality	3/- do.
Do., second quality	2/4 do.
Underlining	1/8 do.
Sheathing	1/8 do.
Galvanized felting nails	2/- lb

## THERMAL INSULATION—

½in Insulating Gypsum Baseboard (600sq yds)	3/-sq yd
½in Do. Do. Lath do.	3/- do.
½in Do. Do. Wallboard do.	3/10 do.
½in Do. Do. Fibre Board (100sq yds)	4/3 do.
½in Do. Do. Cork Slabs	7/6 do.
Silicate Cotton (2ton lots)	2/2½ft cube

## STONE

PER FOOT CUBE in random blocks not exceeding 20ft cube in each, free on rail London.

Monks Park 8/1½ St. Aldhelm 9/1½

Portland brown Whitbed 8/5

Other stone but delivered to sites. Doultling 8/11, Beer 8/5

## TIMBER

Softwood—sawn—random lengths.

	Per standard	Per cubic ft
Carcassing quality	£105	12/8
Joinery quality	£125 and up	13/4
Plain edged unsorted flooring, per square	½in 90/- 1in 110/- 1½in 138/- 1¾in 165/-	

¾in Hardboard (250yd) 5/8 sq yd.

Larger quantities cost less, and smaller quantities more.

## SUNDRIES—

	Dia.	3in	6in	9in
Black hexagon	½in	6½d	9d	11d
bolts, nuts and washers. Each	½in	9½d	1/0½	1/1
Sashline, hemp, good quality	½in	1/2	1/6	1/10
Per Yd Run		No. 6 10d	No. 8 1/1½	No. 10 1/5
Floor brads			76/-	per cwt
Cut Clasp Nails			77/-	per cwt
Steel ordinary screws	1in No. 8 3/1	2in No. 8 5/4		per gross
Brass, do.	Do. 9/8	Do. 17/-		

## HARDWOOD—

	Per ft	super	Per
Prime	½in	1in	ft cube
African mahogany	2/4	2/6	28/-
Honduras do.	3/3	4/-	50/-
Portuguese Guinea do.	3/1	3/3	36/-
African walnut	2/5	2/7	29/-
Australian do.	5/6	5/10	65/-
English oak	4/3	4/6	50/-
Yugoslavian do.	3/4	3/7	40/-
Burma and Siam Teak	5/-	5/9	65/9

## DOORS.—STANDARD TYPE SOFTWOOD

Each in quantities 12 or more.  
 1½in finish, 4 horizontal panels moulded both sides 6ft 6in high  
 Each in quantities 12 or more.  
 2ft 3in wide 41/-  
 2ft 6in do. 42/3  
 2ft 9in do. 44/6

FLUSH DOORS, 1½in thick, 2in (nominal) as last but upper ply faced both sides, lipped edge.  
 2ft 6in wide 59/-  
 2ft 9in do. 62/-  
 All 6ft 6in high.  
 2ft 6in do. 49/6

PANELLED DOORS :  
 see B.S. 459—Part 1.

FLUSH DOORS :  
 see B.S. 459—Part 2.

2ft 6in wide 55/9  
 2ft 9in do. 58/3  
 2in (do.) all as above but in 2 panels.  
 2ft 6in wide 51/3  
 2ft 9in do. 53/6

## IRONMONGERY

	2in	3in	4in	5in	6in
Cast iron Butts, per pair	1/2	2/-	3/2	5/11	8/5
Hinges, spring, single action regulating, japanned, each	—	8/-	12/-	15/3	21/-
Do. but double action spring only, each	—	16/6	21/-	25/9	33/-
Do. blank only, each	—	8/9	12/-	17/9	21/-

## CURRENT MARKET PRICES (Continued)

## IRONMONGERY—Continued

	12in	18in	24in	30in	36in
Tee hinges (japanned)					
per pair	2/-	3/10	—	—	—
Do. but stronger, per pair	3/4	6/1	8/3	—	—
Hook and Ride hinges, per pair	—	—	13/4	16/3	24/10
<b>BOLTS—each—</b>	3in	4in	6in	8in	10in 12in
Cabinet, barrel, straight or necked	1/6	1/8	2/-	—	—
Square spring, with brass knob	1/4	1/6	1/11	—	—
Tower bolts	—	1/8	2/4	3/1	3/10 4/7
Barrel bolts	—	2/6	3/7	4/8	6/- 7/3
Add to Tower or Barrel bolts if necked	—	1/4d	1/4d	1d	1d 1d
<b>LOCKS—each—</b>					
Rim lock, 2 lever, wrote case, brass bolt and bushing	12/9				
Mortice lock, 2 lever, bushed	12/9				
Cylinder latches, japanned case					
Brass sash fastener					
Casement fasteners (malleable)					
Do. stays (do.)					
Axle pulleys (brass face, iron wheel)					
Do. as last, but with brass wheel					
Sash line, No. 8 Anchor, yellow label					
Brass furniture					
or Bakelite do.					
Bakelite finger-plates					
Brass furniture					
or Bakelite do.					
each					
do.					
do.					
do.					
do.					
do.					
do.					
per yard					

## METAL GOODS

British rolled steel joists ex mills to basis sections on site (6in by 5in, 8in by 5in or 6in, and 10in or 12in by 6in)	£37/0/0	per ton
Extra cost over basis for following sections—		
9in or 18in by 7in, 14in by 5 1/2in, 15in by 5in, 14in or 15in or 16in or 18in by 6in, 20in by 6 1/2in, 20in by 7 1/2in, 10in or 12in or 14in or 18in by 8in	11/-	per ton
5in by 4 1/2in, 7in by 3 1/2in, 13in by 5in	16/6	do.
12in by 5in, 22in by 7in	22/-	do.
6in by 4 1/2in, 7in or 8in or 9in by 4in, 10in by 5in	27/6	do.
4in by 3in, 10in by 4 1/2in	33/-	do.
5in by 2 1/2in, 5in by 3in	38/6	do.
6in by 3in, 24in by 7 1/2in	44/-	do.
3in by 3in	55/-	do.
4 1/2in by 1 1/2in	71/6	do.
3in by 1 1/2in, 4in by 1 1/2in	77/-	do.
1/2 mild steel reinforcing rods ex mill d/d	£40/16/0	do.
Extras per ton		
1/2 in diameter in size	63/-	per ton
3/4 in	75/6	do.
1 in	97/-	do.
1 1/4 in	139/-	do.
1 1/2 in	181/-	do.
1 3/4 in	202/-	do.
Extras for length		
5ft to 3ft	7/6	do.
3ft to 2ft	15/-	do.
2ft	22/6	do.
40ft to 45ft	15/-	do.
45ft to 50ft	22/5	do.
Bolts and Nuts	100/-	per cwt
Trench covering, including trays 1 1/2in deep and rebated frames, 9in wide	23/-	foot run
Do., but 12in wide	24/9	do.
Do., but 14in wide	27/-	do.
Do., but 18in wide	35/6	do.

## METAL SUNDRIES

Cast iron pavement lights with 4in by 3in prism and convex lenses in alternate rows	33/-	per ft super
Iron single fire doors, panelled both sides, pivot hung and self closing, to angle frame rebated and lugged, to meet fire regulations	54/-	do.
24 gauge galvanized Tallboy 6ft high, 9in diameter with 9in by 12in base	55/-	each

## CHAIN LINK FENCING—

	In 25 yards lineal rolls inclusive of line wire.			
2in mesh	Height in inches—			
	36	42	48	60
10 1/2 wire gauge	100/9	117/6	134/6	166/6
12 1/2 do.	71/-	82/9	94/6	118/3
14 1/2 do.	50/9	59/-	67/3	84/6

## DOUBLE SOOT DOORS AND FRAMES—

Fitted with brass turn-buckle and cast key	9in by 9in	12in by 9in	14in by 12in
	19/6	28/9	49/6

## SLIDING DOORS, GATES AND PARTITIONS—

Factory sliding doors in two leaves containing about 100 sq ft with mild steel angle frames covered with 24 gauge corrugated galvanized sheeting and including hanging tubular track and gear complete	18/6	ft super
Factory entrance gates with mild steel frames clad with 2in mesh chain link complete	16/6	do.

## STEEL ROOF LIGHTS—

In Skylights and Lanterns, Standard type with puttyless glazing, lead flashings, and 1/2in rough cast glass; in the case of Lanterns 18in vertical sashed sides are provided in addition.				
Size at Base	6ft by 4ft	8ft by 6ft	10ft by 8ft	
Skylights	£34	£49	£67	
Lanterns	£53	£74	£106	

## HIGH GRADE DOMESTIC BOILERS—

Coke Fed. Performance 20 to 40 gallons raised from 47°F to 140°F per hour as under.

TYPE		£	s.	d.
20 gallons per hour	Plain cast iron, black finish	11	0	0
15in wide, 23in high	Do., in cream mottle finish including side jackets	15	15	0
25 gallons per hour	In cast iron as before and base plate	11	17	0
19in wide, 22in high	Do. in cream mottle with side jackets and base	17	5	0
40 gallons per hour	In cast iron, etc., as last do.	18	15	0
22in wide, 23in high	Do. in cream mottle all as last do.	25	17	0

GAS, WATER AND STEAM TUBES  
(From Standard List)

Internal Diameter—	1/2in	3/4in	1in	1 1/4in	1 1/2in	2in
Tubes per ft	4d	4 1/2d	5 1/2d	6 1/2d	9 1/2d	1 1/4 1/10
Bends each	8d	9d	11d	1 1/2	1 7/8	2 7/8 3/2 5/2
Elbows, sq. do.	10d	11d	1 1/4	1 1/2	1 3/4	2 1/4 2 3/4 3 1/4
Do., round do.	11d	1 1/4	1 1/2	1 3/4	1 7/8	2 1/4 2 3/4 3 1/4
Tees	1/-	1 1/4	1 1/2	1 3/4	1 7/8	2 1/4 2 3/4 3 1/4
Crosses	2/2	2 1/4	2 3/4	3 1/4	4 1/4	5 1/4 6 1/4 7 1/4
Backnuts	2d	2 1/4	3d	3 1/4	5d	6d 8d 1 1/4
Sockets	3d	3d	4d	5d	6d	8d 10 1/4d 1 1/4
Sockets, dimin.	4d	5d	6d	7d	9d	1 1/4 1 3/4 2 1/4

## PERCENTAGES ON OR OFF ABOVE

In quantity and in random lengths.

TUBE—				
Class A (light)	—11%	Black	+12%	Galvanized
Class B (medium)	+1%	Do.	+23%	Do.
Class C (heavy)	+16%	Do.	+41%	Do.
FITTINGS—				
Lightweight	+26%	Black	+39%	Galvanized
Heavy	+34%	Do.	+47%	Do.

## RAINWATER GOODS (Painted or Unpainted)

In consignments of 5cwt and over

Pipe :		2in	3in	4in	5in	6in
6ft lengths	each	12/10	14/5	18/11	24/8	31/6
3ft do.	do.	7/-	7/9	10/-	13/1	16/6
Shoe, ordinary	do.	2/7	3/10	5/7	9/5	12/11
Bend	do.	3/1	4/4	6/3	11/3	14/7
Branch, single	do.	4/6	6/7	9/3	14/7	22/6
Offset, 4 1/2in	do.	3/9	5/3	7/9	12/11	17/-
Do. 9in	do.	4/11	6/6	9/8	15/3	19/3
H.R. gutter, 6ft length	do.	—	6/-	8/5	10/4	13/10
Angle or nozzle	do.	—	2/6	3/1	3/9	5/4
Stop end	do.	—	9d	1/1	1/6	1/9

Above plus 12 1/2%

## CURRENT MARKET PRICES (Continued)

## PLASTERING MATERIALS

Sand, lime, cement and various plasters are previously included under those heads—			
Metal lathing (½in by 24G) (20 yards)	..	..	3/11 sq. yard
Plaster baseboard ½in (600 yards)	..	..	2/4 do.
Lath nails, galvanized	..	..	1/2 lb
White glazed tiles (6in by 6in by ½in)	}	small quantity	17/9 sq. yard
Do. rounded on one edge			22/3 do.
Do. on two adjoining edges			27/- do.

## PLUMBER'S GOODS

4lb lead sheet (in 1-ton lots)	..	..	149/6 per cwt
Lead water pipe in coils (do.)	..	..	151/9 do.
Plumber's solder	..	..	4/- lb
Copper tacks	..	..	6/9 do.

## IRON SOIL AND WASTE PIPE. (5cwt lots and up)

	each	2in	3in	3½in	4in
½in Medium pipe, 6ft length	..	14/6	17/2	19/3	21/11
Do., 4ft length	..	10/5	12/2	13/7	15/5
Bends	..	5/4	6/6	8/1	9/1
Do., with oval door	..	17/4	18/6	21/1	24/7
Junction, single	..	6/6	9/8	11/3	13/3
Do., with oval door	..	18/6	21/8	24/3	26/3
Swan necks, 4½in	..	6/6	10/3	11/9	13/9
Do., 9in	..	8/8	11/9	13/9	16/1
Holderbat, 2½in projection	..	5/9	5/11	6/2	6/4
Above plus 12½%					

## GALVANIZED CISTERNS, TANKS AND CYLINDERS—(Less than four)

each		gallons			
CISTERNS—		Nominal capacity			
Bends over tops and corner plates. Riveted or welded		100	150	200	300
14 gauge .. .. .		171/6	234/3	283/4	405/-
12 gauge .. .. .		198/6	252/7	312/-	436/6
½ in plate .. .. .		236/-	296/8	355/6	499/-

## HOT WATER TANKS

Riveted and with handhole and ring.	20	25	30	40
12 gauge	..	118/6	131/6	143/6
½in plate	..	131/-	143/5	155/10

## HOT WATER CYLINDERS—

Riveted, with handhole and ring.	20	25	33	39
12 gauge	..	159/-	167/6	189/-
½in plate	..	177/-	195/6	214/-

## PLUMBER'S BRASSWORK, etc.

	Each	½in	¾in	1in	1½in
Boiler screws, single nut	..	1/7	2/-	3/2	5/2
Do., double nut	..	2/-	2/7	4/2	6/6
Cap and lining	..	1/1	1/7	1/10	2/-
Plumber's unions	..	2/7	3/4	4/9	7/7
Ball valves, screwed iron	..	15/3	22/3	—	—
Do., fly nut and union	..	16/5	23/9	—	—
Bib valves, crutch top screwed iron	..	9/-	12/9	—	—
Do., but screwed boss	..	10/1	14/4	—	—
Stop valves, screwed iron	..	7/3	10/3	—	—
Do., screwed iron and union	..	9/3	13/-	26/-	—
Do., double union	..	10/3	14/6	29/6	—
Waste, plug chain and stay	..	1½in	1½in	2in	4in
	..	3/1	3/6	5/6	—
Caps and screws	..	—	—	7/5	10/-
Sleeves, long	..	—	—	3/8	8/6
Do., short	..	—	—	3/8	4/8
Thimble	..	—	—	3/8	10/2
Full way gate valves, hot pressed	..	20/9	30/-	—	—
	..	—	1½in	1½in	2in
Lead 7lb P. trap	..	..	7/7	10/-	14/1
Do., S. trap	..	..	9/5	12/4	17/4
Lead 6lb P. traps with 3in seal	..	..	8/6	10/3	—
Do., but S. traps, do.	..	..	10/7	12/11	—
Wire balloon guards, copper, 2in 3/1 ; 4in 3/4	..	..	..	..	..
Do., galvanized iron, 2in 1/11 ; 4in 2/1	..	..	..	..	..
Hair felt, 34in by 20in, 24oz, 6/- sheet	..	..	..	..	..
Boss white jointing compound, 2/- lb	..	..	..	..	..
Gasket, 1/10½lb. Hemp, 7/3lb.	..	..	..	..	..

## COPPER TUBES—Extract from B.S. 659/1955—

Nominal bore	Internal work (semi-hard). Outside diameter inch	Gauge	Weight lb per ft	Price per lb pence	3cwt lots per ft pence
½in	0.596	19	0.27	45½	12.29
¾in	0.846	19	0.39	43½	17.12
1in	1.112	18	0.62	42½	26.28
1½in	1.362	18	0.76	41½	31.73
2in	1.612	18	0.91	41½	38.00
2½in	2.128	17	1.40	43½	60.73

## CAPILLARY TYPE CONNECTIONS—

All ends copper to copper							
Each	½in	¾in	1in	1½in	2in	2½in	3in
Straight	..	1/8	2/4	3/8	4/10	6/6	9/4
Bends	..	4/4	5/4	7/8	10/6	16/6	23/2
Tees	..	4/-	4/8	7/6	11/-	15/8	23/2
Brackets (Brass)	..	2/5	2/10	3/4	—	—	—

## GLASS

English, flat drawn sheet glass cut to sizes in squares	Per foot superficial	24oz.	26oz.	32oz.
Figured rolled and cathedral, white, cut to sizes, in squares (½in)	..	8½d	11d	1/2½
Ditto, but in standard tints	..	1/8	—	—
½in Rolled, cut to size, in squares	..	10½d	—	—
½in or ¾in rough cast do.	..	1/2½	—	—
½in do. wired do.	..	1/5	—	—
Georgian wired do.	..	1/5½	—	—
Fluted (No. 4) do.	..	1/6½	—	—
Reeded, (narrow, broad, cross and major) do.	..	1/3½	—	—
Reedylite (narrow and broad) do.	..	1/3½	—	—
Spotlyte do.	..	1/3½	—	—
½in Calorex Cast do.	..	1/3½	—	—
Calorex Sheet (15oz)	..	6/9	—	—
do. (21oz)	..	9/3	—	—
Flashed Opal (15/18oz)	..	4/3	—	—
Pot Opal (15/18oz)	..	4/3	—	—

## POLISHED PLATE GLASS (Tariff) Cut to sizes.

Ordinary substance ½in and ¾in thick.	Per Superficial ft	General Glazing
In plates not exceeding :		
2ft super in each	..	3/10
5ft do.	..	4/9
45ft do. (unless extra sizes)	..	5/7
100ft do. (do.)	..	6/-
Extra sizes, i.e., Plates exceeding 100ft super or 160in one way or 96in both ways at higher prices.		

## DECORATING MATERIAL

	Price	Unit
Aluminium Paint	..	Gallon
Distemper, ceiling	..	Cwt
Distemper, washable	..	do.
Enamel	..	Gallon
Gold Metallic Paint	..	do.
Heat Resisting Paint	..	do.
Japan, black	..	do.
Knotting	..	do.
Linseed Oil	..	do.
Boiled, do.	..	do.
Proprietary Paints (good class)—		
Finishing	..	do.
Priming	..	do.
Undercoat	..	do.
Paperhanger's Paste	..	Cwt
Petrifying liquid	..	Gallon
Putty	..	Cwt
Size	..	Firkin
Terebinte	..	Gallon
Turpentine substitute	..	do.
Varnish, oak, copal inside use	..	do.
Do., do., outside use	..	do.
Do., white, eggshell, flat	..	do.
White lead mixed paint	..	do.
White lead	..	Cwt
Whiting	..	do.



# CURRENT MEASURED RATES (LONDON)

These apply to new work of normal character and some size. These rates are for time and materials only and carry 10 per cent in excess, so the appropriate essential on-costs should be added. The basis cost of material used in the calculation of these prices is taken from the foregoing tables which carried up to December 17, 1956.

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## ESSENTIAL ON-COSTS

Fees payable to L.C.C. for District Surveyor:

For new buildings of ordinary construction exceeding 5,000 cubic feet, for every 1,000 feet or part of same up to 1,000,000 cubic feet 1/6, together with an additional sum of £1/10/- .. £1/10/- at + 1/6  
After which allow per 1,000 do. .. at + 9d

For alterations and additions:

When £100 the sum of £2/10/-, plus 12/6 for every £100 or part of same, up to £1,000 .. £2/10/- at + 12/6 per 100  
When over £1,000 the sum of £8/2/6, and for every £100 or part of same beyond 3/- .. £8/2/6 at + 3/- per 100  
Public buildings: Fees as above but plus 50% .. + 50%

Fees in respect of means of escape in case of fire are 1/5th of the above or £2 if greater or in the case of a one-storey building £1 .. 1/5th  
Steel framed or r.c. buildings double .. + 100%

Allowance to cover National Insurances, Holidays with Pay and Public Holidays, Welfare, Third Party Risk, Travelling and Guaranteed Week is made in the rates attached to the items.

Allow for Fire Insurance do. .. 1/6%  
Allow for Water for use on the works and apparatus do. .. 6/6%  
Allow for hoarding, or similar licences in City of London say £10 Do. under Borough Councils per each month .. say 2/6  
Allow for Office, Fire, Attendance on C. n W., etc. p. week say £1

Supervision, etc., assessment	Contract value				
	£4,000	£6,000	£12,000	£24,000	£50,000
Cost of admin. ..	6%	5%	5%	4½%	4½%
Agent or foreman (each) ..	5%	4½%	3½%	2½%	1½%
Timekeeper or Watchman (each) ..	2½%	2½%	1½%	1%	¾%

## SPOT ITEMS AND DEMOLITION, ETC.

	Per ft run
Hoarding erected and removed ..	19/-
Planked gangway with handrail, etc. do. ..	10/-
Proper gantry do. ..	75/-
Sleeper roadways ..	16/-
Needling, strutting and shoring including all labours and use and waste in erection and removal. ..	19/-

ALTERATION-DEMOLITION—	1 Brick	1½ Brick	2 Brick	Per yard cube
Cutting out cement concrete or brickwork in small quantities ..	1/3	2/5	3/5	61/-
Do. if either in very small quantities or reinforced ..	2/2	3/11	5/8	89/11
Debris into baskets and removed from inside to outside of bldg. ..	3½d	7d	9d	13/-

## SCAFFOLDING (Avg. 45ft high)

Per yard superficial	1 month	3 months	5 months
Putlog type—4ft 6in lift ..	6/2	8/3	10/8
Do. —6ft 0in do. ..	4/7	6/4	8/1
Independent type—4ft 6in lift ..	7/11	11/4	14/10
Do. —6ft 0in do. ..	5/8	8/2	10/3

EXCAVATION	Common Soil	Loamy Clay	Gravel or Clay	Rock or similar
Per Yard Cube By hand ..	6/1	7/3	8/6	56/9
Reducing levels ..	12/5	14/10	19/9	70/7
Surface trench not exceeding 5ft deep ..	22/8	25/6	30/6	77/-
Do. from 5ft to 10ft ..	28/3	31/1	36/-	84/3
Do. from 10ft to 15ft ..	4/10	5/6	5/6	5/6
Fill in and ram ..	2/10	3/2	3/2	3/7
Barrowing 25 yds. ..	16/9	16/9	17/9	18/6
Load vehicles and tip 8 miles away ..				

## PLANK AND STRUT

To trenches, in normal ground	To 5ft deep	5 to 10ft deep	10 to 15ft deep
Per Ft Super ..	7d	8½d	10d

CONCRETE 1½in Ballast Aggregate	Per yard cube
1 : 3 : 6 Cement concrete in foundations ..	76/6
Do. around grillages ..	79/6

## REINFORCED CONCRETE

1 : 2 : 4—½in concrete, worked around reinforcement, between formwork in the following (at various levels):—	Per cubic yard
Foundations and surface beds ..	85/-
Walls, 12in thick or more ..	90/8

Sectional inches	Lintols and beams	Columns and casings	Braces and projections
Up to 36 ..	4/7	4/11	4/9
36 to 72 ..	4/5	4/8	4/6
72 to 144 ..	4/4	4/7	4/5
over 144 ..	4/3	4/5	4/3½
Walls 6in thick ..			18/4
Do. 9in thick ..			27/2
Suspended floors average 6in thick ..			18/1

REINFORCING RODS (round) bent and placed. (Ex Mills)—	Per cwt	½in	¾in	1in	1½in
In floors and beams ..	84/-	72/-	68/-	59/9	
In walls ..	90/-	76/9	72/-	63/3	
In columns ..	96/8	81/6	76/3	66/-	

FORMWORK and Supports (4 times use)—	Floor soffits	Beams	Walls	Columns
19/- per yard	2/6	2/4	2/4	2/4 per super ft

## BRICKWORK

BRICKWORK per YARD superficial reduced to ONE BRICK in thickness (scaffold to add)—	In 1 : 3 cement mortar
Flettons or other similar at 115/- per 1,000 ..	39/10
Mild Stocks or do., at 226/6 per 1,000 ..	54/4
Second Stocks or do., at 281/- per 1,000 ..	60/1
Southwater engineering or similar bricks, at 382/- per 1,000 ..	74/7
Blue Staffordshire wire cut at 530/6 per 1,000 ..	90/4
Deduct if 1 : 1 : 6 Cement-Lime mortar is used in lieu of 1 : 3 Portland Cement mortar ..	2d
Add if brickwork commences above ground level ..	4/-
Do. if in backing to masonry including cutting and waste for bonding ..	3/3
Do. If circular-on-plan ..	7/8
Do. If in underpinning ..	7/8

## BRICKWORK IN THICKNESS NOT REDUCED—

Per yard superficial	Brick, on edge walls	Half-Brick walls	1 Brick finished fair both sides	1½in Hollow with 2in cavity and G.I. TIES
In Flettons or similar ..	17/3	22/-	40/9	46/6
In second stocks or do. ..	23/5	31/1	58/3	64/4
Add: for pointing as work proceeds, per side ..	1/7	1/9	1/7	1/7
Thickness to old walls, including cutting, toothing and bonding to same an average total thickness of ½ brick ..	55/3	69/6		Per yd super do.
Do. all as last but an average total thickness of 1½ bricks ..	75/4	99/8		

## WALLS BUILT IN SUPERIOR BRICKS—

In 1 : 3 Cement mortar, fair faced and pointed on both sides as the work proceeds:—	Half-Brick	One Brick	Per yd super
In first quality Stocks at 302/- ..	36/6	65/1	
In red facings at 320/- ..	36/-	64/6	
In blue pressed facings at 587/- ..	56/8	98/11	

## GENERAL AND SUNDRY—

Cut tooth and bond new brickwork to old ..	4/11 per ft
Damp proof course, double slate, horizontal ..	3/9 super
Do., as last, but vertical ..	4/7 do.
Do., bitumen, Hessian base, do. ..	2/- do.
Frames, bed and point in cement mortar, one side 4½d per ft run	
Window board of 6in by 6in by ¾in rounded on edge ..	3/6 do.
quarry tiles, bedded, pointed, cut and fitted ..	9in by 9in
Terra cotta air bricks built in and pointed, including flue ..	5/6
Chimney pots, plain red, set and flauched in cement mortar ..	1ft high
Metal windows, assembled, hoisted and fixed, lugs cut and pinned and frames bedded and pointed one side in cement mortar ..	Up to 5ft super
Leaving holes through walls for pipes and afterwards making good ..	Small pipes 3d per in in depth
Cutting do., and afterwards do. ..	11d do.
Cut mortices in brickwork or concrete for bolts or dowels and run in with cement grout ..	1/2 per in in depth, each
Holdfasts of stout iron hoop bent holed and screwed to frame and built in ..	1/6 each

**MEASURED RATES—Continued****BRICKWORK—Continued****FACING—**

Extra only over common brickwork (115/- per 1,000) for facing with superior bricks in *Flemish bond* and pointing as the work proceeds.

Rustic Flettons (145/-)	..	..	4/2 per yd super
White (220/-)	..	..	9/9 do.
First Stocks (302/-)	..	..	16/3 do.
Reds (320/-)	..	..	17/3 do.
Blue pressed (587/-)	..	..	37/3 do.

If built in English bond, Add 12½% to above.

If do. half-brick stretcher bond, Less 25% off above.

**COPING—**

All labour and material in forming brick-on-edge coping with two course of roofing tiles under and cement weather fillets on both sides, built in cement and pointed as the work proceeds.

Per ft run	9in thick	14in thick
In picked Flettons	6/3	8/5
In first quality Stocks	7/7	11/1
In red facings	7/5	10/11

Plumbing angles	..	..	2d per ft run
Fair cutting	..	..	11½d do.
Fair raking cutting	..	..	1/6½ do.
Fair circular cutting	..	..	1/6½ do.
Fair squint or birdsmouth	..	..	1/10½ do.

**ARCHES**

Extra over Fletton brickwork for forming window head with red facing bricks set on end and with 4½in soffits and pointing

Do. for rubbed and gauged flat arch in red rubbers set in putty with fine joints	..	..	ft run	3/7
	..	..	ft super	18/3

**PARTITIONS**

	2in	2½in	3in
Concrete slab partitions in cement mortar (over 100 Yds)	10/9	12/2	14/4
Hollow clay do	12/9	13/8	15/3
Cutting and bonding at angles, inter-sections and ends	..	..	5d ft run

**PAVING**

	1in	1½in	1¾in
Grano trowelled gauge 5 : 2	8/2	9/2	10/3 yd super
1 by 5in skirting, square top and cove bottom	..	..	2/10 ft run
¾in by 6in red quarry tile paving	..	..	29/6 yd super
¾in by 6in do. skirting	..	..	1/10 ft run
Jointless flooring, ¾in thick	..	..	20/- yd super

**ASPHALT (normal conditions and fair quantity)**

	B.S.	Brown 13/2 Mastic B.S.988	Red 15/- Natural Rock B.S.1162/44
¾in pitch mastic floor in one coat on felt underlay on prepared concrete base	1450/48	1375/47	
Per yd super	12/6		
Unit			
¾in in two thicknesses on felt underlay on prepared concrete base	yd super	15/-	22/6
Do. in narrow widths	ft super	2/6	3/6
¾in skirting 6in high, angle fillet at bottom splayed and turned in at top	ft run	2/6	2/9
External angles	each	6d	6d
Internal do.	each	10d	10d
Tanking or Damp Course	B.S.1097/43	B.S.1418/47	
Vertical in two thicknesses	yd super	22/6	30/-
¾in horizontal do.	yd super	13/6	23/6
Vertical in three thicknesses	yd super	32/-	41/-
1½in horizontal do.	yd super	18/-	29/-
Labour rounded external angle	per ft run	6d	6d
Do. internal angle fillet	per ft run	10d	11d
Do. double do.	per ft run	1/3	1/3
Collars to small pipes	each	3/6	4/-
Do. to large pipes	each	6/6	8/-

**DRAINAGE**

Per lineal yd	1 ft in depth	4/9
Excavate trench, and plank and strut to sides, consolidate bottom to fall, return fill and ram earth after drain is laid and load and remove surplus. In ordinary ground—moderately firm.	2 do.	8/3
	3 do.	19/3
	4 do.	25/-
	5 do.	32/-
	6 do.	42/11
	7 do.	52/4
	8 do.	66/3
	9 do.	77/-
	10 do.	94/8
	11 do.	107/5
	12 do.	121/-

Portland cement (1 : 6)	Per yd run	4in	6in	9in
concrete bed under drain	18in wide	20in wide	23in wide	
pipes and benching up on both sides—6in thick	8/-	9/6	11/6	

**SALT GLAZED SANITARY DRAIN PIPES**

and lay and joint with Yarn and Cement Mortar in trench.

Quality	Quantity	4in	6in	9in
"Best"	2ton or more	3/2	4/4½	7/4
	over 100 pieces	3/5	4/10½	8/2
	under 100 do.	3/6	4/11½	8/6
"Best Tested"	2ton or more	3/11	5/1½	9/2
	over 100 pieces	4/4	6/4½	10/6
	under 100 do.	4/5	6/7½	10/10
"British Standard"	2ton or more	3/4	4/11½	7/9
	over 100 pieces	3/9	5/6½	8/9
	under 100 do.	3/10	5/9½	9/6
"British Standard Tested"	2ton or more	4/1	6/1½	9/11
	over 100 pieces	4/8	7/1	11/4
	under 100 do.	4/11	7/3½	12/-
Extra for bends "Best"	Contained in 2 ton lots.	4/2	6/3	16/6
Extra for junction "Best"	—4in on 4in, 6in on 6in—9in on 9in	do.	6/6	9/9 27/-

**IRON DRAIN PIPES—**

Heavy cast iron socketed and laying and jointing in molten lead—	Per ft run	4in	6in
In main runs	..	13/3	18/5
In branches	..	14/7	20/-
each			
Extra over last for bends and extra joint	..	28/6	61/6
Do. on do. for junctions and extra joint	..	42/4	79/6
Cast iron gully with 10½in inlet and 4in outlet, composed of hooper and trap, and 9in extension piece and 10½in grating, and jointing all together, and jointing to drain and surrounding in concrete	..	177/-	—
Do. rain water, shoe with vertical inlet and inspection cover, and joint up and embed	..	81/6	135/-

**MANHOLE SUNDRIES—**

Salt glazed straight half-round main channels	4in	6in
each	5/-	7/-
Do. curved	10/6	15/-
Do. three-quarter section splayed channel bends (Barrons or similar)	do.	14/3 20/8
Heavy manhole steps galvanized	do.	9/9 —
Fix only manhole covers	do.	11/- —
4in Mica flap, brass faced, f.a.i. valves and fix with molten lead joint	do.	38/6 —

**ROOFER****CORRUGATED ASBESTOS SHEETS**

P.C. 7/4½ per super yd, including side and end laps and fixing to wood	150/- per square
Eaves filler pieces	2/- ft run
Adjustable ridge	3/6 do.
Barge boards	2/8 do.
Plain roofing tiles, machine made, sand faced, 4in gauge nailed every 4th course with 1½in galvanized nails, to battens (measured separately)	285/- do.
Extra over last for top edge or abutment cutting	1/6 do.
Do. for double course at eaves	2/10 do.
Do. for verges, undercloak, bed and point	3/9 do.
Do. Valley tiles including cutting and waste on both sides	11/3 do.
Do. Bonnet hips and do. bed and point	11/9 do.
Half-round ridge and bed and point	3/3 do.
Fixing soakers	1/6 dozen

Bituminous felt roofing in two layers, laid breaking joint and bedded with hot mastic and finished with fine dry grit

Do. but in one layer only	11/6 yd
	8/6 ft super
	Per square

**WELSH SLATING**

3in lap, 2 zinc nails to each slate	16" x 10" 312/6	18" x 10" 319/6	20" x 10" 378/6
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**Additional labours**

At tops, verges and abutments—straight	Per ft lineal	1/9	1/11	2/2
Do. —raking	..	2/7	2/11	3/2
At hips and valleys (each side)	..	2/7	2/11	3/2
At eaves, double course	..	3/6	3/10	4/4
Do. to falls	..	5/3	5/6	6/4



"CAPELLO", TORQUAY, DEVON

*Architect: Edward Narracott, F.R.I.B.A.*

# HOPE'S


HOT-DIP GALVANIZED

# WINDOWS

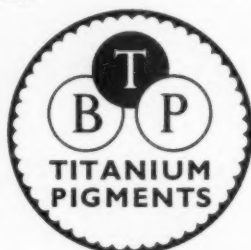
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**MEASURED RATES—Continued****FLOORS AND FLATS**

Hollow tile <i>in situ</i> or precast units hoisted, bedded and fixed—			
	Superimposed load in lb per ft super	12ft Joists	16ft Span
Per yd super	50 ..	48/6	55/-
	100 ..	50/3	59/-
	150 ..	55/-	64/-
20lb has been allowed to cover dead load in surface, finish.			
Fair edge to slabs	.. ..	..	9d per ft run
Play cutting and waste	.. ..	..	1/9 d.o

**CARPENTER AND JOINER**

SOFTWOOD CARCASSING—			
Labour, materials, waste nails, hoisting and fixing ..	Plates 18/10	per ft cube— Joists 20/1 Rafters 21/8	Trusses 24/3

FLOORING—		Per square—	3in	1in	1½in
Rough boarding	.. ..		141/6	161/6	198/6
Softwood batten flooring, straight joints, splayed headings	.. ..		143/-	163/-	200/6
Do. grooved and tongued	.. ..		162/8	193/2	237/9

SKIRTING—		Per ft superficial—	½in	¾in	1in
Wrot softwood moulded skirting with grounds and backings plugged ..			3/8	4/3	4/10
Mitres to do ..	3d per sectional in				
Fitted ends ..	2d do.				

SASHES, fanlights, casements, borrowed lights, etc.—			
Per ft super—	Without bars	With bars (2ft sup. in each square)	
2in softwood rebated, moulded and fixed ..	.. ..	3/2	5/7
Add if fitted with beads ..	.. ..	6d	1/6
Add if hanging on butts ..	.. ..	2/5 each	..

WINDOWS, hung on lines—			
	Softwood cased frames, 1in inner and outer linings, 1 1/2in pulley stiles, 2in sashes, oak sill ..	Overall size of frames—	
Per ft super	.. ..	6ft 21ft 32ft 44ft	
Windows as described ..	19/-	10/7	7/11 6/2
Add if sashes in squares, about 2ft super in each ..	.. ..	1/6	2/- 1/11
Extra for hanging sashes with lines, weights and axle pulleys	.. ..	30/3 50/3	62/3 84/3

FINISHINGS TO OPENINGS—			
	Per ft super—		
Softwood linings, tongued at angles and tongued to frame including grounds and backings ..	.. ..	3/7 4/1 5/- 5/7	
Add if crosstongued ..	.. ..	6d 6d 6d 6d	
Softwood wrot rounded on front edge and with tongue at back window board including groove in sill and bearers ..	.. ..	3/6 4/- 4/11 5/5	
Add for ends to last notched, returned and rounded ..	.. ..	1/1 1/2 1/3 1/4	

Per ft run—			
	Sectional area in in—		
Softwood wrot and fixed in bearers, backings, grounds, fillets, and similar ..	1 2 3 4 5 6		
Add if in short lengths ..	3 1/2d 6d 8 1/2d 11d 1 1/4 1 3/8		
.. if plugged to brickwork ..	4d 4d 4d 4d 4d 4d		
.. if framed as in legs and bearers ..	3d 3d 4d 4d 6d 6d		
.. if rebated or grooved or beaded ..	3d 3d 3d 3d 3d 3d		
.. if chamfered or rounded edges ..	.. ..	1 1/2d	
.. if moulded in architraves, capping, etc. ..	.. ..	3d	

DOOR FRAMES—		Per ft run—				
Per sectional in—	6in	8in	10in	12in	13½in	
Softwood, wrot, rebated, rounded, framed and fixed	2/2	2/6	3/2	3/6	3/9	

DOORS—Per ft super			
	Number of panels—		
2in Softwood square framed and flat panels, both sides, on butts ..	1 2 3 4 5 6		
1 1/2in do. ..	5/8 6/6 7/- 7/6 7/10 8/4		
Add for each side moulded ..	5/1 5/11 6/4 6/9 7/2 7/8		
Add B.S. flush panelled ..	3d 4d 5d 6d 7d 8d		
	1/6 1/6 1/6 1/7 1/8 1/8		

	Per ft super—	3in	1in	1 1/2in	1 1/2in
In shelves, table tops, wrot and fixed	2/4	2/7	3/-	3/6	3/6
Do. in divisions and ends framed ..	2/7	2/10	3/3	3/11	3/11
Add if crosstongued ..	.. ..	6d	6d	6d	6d
Add if buttoned ..	.. ..	6d	6d	6d	6d

SUNDRIES—Per ft run—			
	In short lengths	In long lengths	Add for cups and screws
Glazing, beads mitred around and fixed with brads ..	6d	4d	2d
Rounded heel or hollow ..	.. ..	4d	..
Tongued and grooved angle ..	.. ..	6d	..
Glue blocking ..	.. ..	6d	..
Mitres ..	3d	per sectional in	..
Fitted ends ..	2d	do.	..

STAIRCASE—			
	Per ft super		
1 1/2in Softwood treads with moulded nosings, 1in risers tongued both edges and glued, blocked and bracketed on and including two fir framed carriages ..	.. ..	6/-	
Do. but in winders ..	.. ..	7/3	
1 1/2in crosstongued landing on framed carriages	.. ..	6/-	
2in moulded string ..	.. ..	5/-	
2in do. ramped ..	.. ..	11/9	
Ends framed to newel ..	.. ..	9/8 each	
Tongued and mitred angles ..	.. ..	5/6 do.	
Tongued heading joints ..	.. ..	5/6 do.	
Ends of treads and risers housed to string ..	.. ..	3/6 do.	
Extra for curtail ends to steps, glued up and veneered riser and solid blocking ..	.. ..	100/- do.	
Balusters about 2ft 9in long, square and framed each end ..	1in 3/9	1 1/2in 4/6	1 1/2in 5/3
3 1/2in by 3 1/2in square newel, framed ..	4/-	per ft run	
African mahogany moulded 3in by 2in hand- rail. (Joints below) ..	.. ..	8/9 do.	
Do. ramped 18in girth (do.) ..	.. ..	52/- each	
Do. wreathed do. (do.) ..	.. ..	155/- do.	
Joint or framed ends ..	.. ..	11/- do.	

FIXING ONLY IRONMONGERY			
	To deal	To hardwood	
Barrel bolts ..	1/8	2/6 each	
Flush bolts ..	4/-	4/10 do.	
Sash fasteners ..	3/2	2/10 do.	
Rim locks and furniture ..	5/6	7/- do.	
Mortice locks and do. ..	11/-	17/- do.	
Cupboard locks ..	2/9	3/5 do.	
Casement fasteners ..	2/3	2/9 do.	
Do. stays ..	2/3	2/9 do.	
Grip handles ..	2/7	3/5 do.	
Spring catches ..	2/3	2/9 do.	
Cabin hooks ..	1/10	2/5 do.	
Floor springs including oil ..	47/-	60/- do.	
Overhead springs ..	14/-	16/6 do.	
Springhinges ..	11/-	13/6 do.	

**SMITH AND FOUNDER**

Basis framed steel joists and hoist and fix			
Do. but in compound girders ..	74/-	per cwt	
Do. but in stanchions ..	84/-	do.	
Trusses ..	86/-	do.	
Additional cost per cwt over basic sections for following R.S.J.s	125/-	do.	
9in by 7in, 10in by 8in, 12in by 8in, 14in by 8in, 16in by 8in, 18in by 6in, 18in by 7in, 20in by 6 1/2in, 20in by 7 1/2in	8d	per cwt	
22in by 7in, 1/1 cwt 4in by 3in ..	1/10	do.	
5in by 3in, 5in by 2 1/2in ..	2/2 1/2	do.	
6in by 3in, 24in by 7 1/2in ..	2/6	do.	
3in by 3in, 2/9 cwt 4 1/2in by 1 1/2in ..	4/-	do.	
3in by 1 1/2in ..	4/4	do.	
Cleats, brackets, packing pieces, etc., in connections, including rivets and bolts	158/-	do.	
Forged straps ..	127/6	do.	
Wrot iron balustrade ..	170/-	do.	

**RAINWATER GOODS—**

Round cast-iron pipe with socketed joints caulked with red lead and tow and fixing with pipe nails and gas barrel distance pieces to plugs in brickwork			
	2in	3in	4in
Extra for shoes ..	4/1	4/6	5/10
Do. junctions ..	5/4	6/10	9/9
Do. bends ..	8/1	10/3	14/10
	6/4	8/1	10/4

RAINWATER GUTTERS		Per ft run—	4in	5in	6in
Half round CI gutters jointed in red lead and bolted and fixed on iron brackets			3/10	4/7	5/7
Ogee do. All as last	.. ..	4/4	5/-	6/2	
Extra for stop ends	.. ..	3/2	3/10	4/-	
Do. angles or outlets	.. ..	5/6	6/11	8/3	

**MEASURED RATES—Continued****PLUMBER**

EXTERNAL—		Soakers		Flats		Flashings	
4lb Milled Sheet lead per cwt		190/-		227/-		238/-	
LEAD PIPES : runnings joints, etc.							
Per ft run		1½in	2in	2½in	3in	3½in	4in
Main	Fixed with hooks	4/11	7/2	10/-	12/11	16/4	22/6
Service		4/5	6/3	8/4	10/3	12/11	18/1
Waste		3/-	4/4	5/8	8/6	9/-	11/7
Bends	each	—	—	—	1/9	3/-	8/-
Solder joints	do.	8/11	10/11	12/10	14/10	17/7	23/2
Union and joints	do.	12/10	16/5	18/6	24/6	—	—
Stop valve and do.	do.	28/8	37/4	51/10	80/9	—	—
Bib valve and do.	do.	20/1	27/1	—	—	—	—
Ball valve and do.	do.	26/9	36/7	49/5	71/11	—	—
Sleeve and do.	do.	—	—	—	—	21/1	28/6

**COPPER TUBES**

Tubes per ft run	1/2in	3/4in	1in	1 1/4in	1 1/2in	2in
Couplings : straight	2/9 1/2	3/5	4/5	5/6	6/2	9/1 1/2
each	3/4	4/-	6/-	7/9	9/11	13/6
Do. Bends each	6/3	7/4	10/5	14/-	21/-	28/10
Do. Tees do.	7/7	8/10	12/8	17/4	23/1	31/8
Do. Cisterns do.	4/2	5/7	7/3	9/4	13/-	16/11
Stop cocks do.	24/4	35/4	63/-	104/6	159/-	240/-

<b>BLACK TUBING (Class C)</b>		1/2in	3/4in	1in	1 1/4in	1 1/2in	2in
fixed with pipe brackets		—	—	—	—	—	—
Tubes, per ft run	..	1/10	2/2	2/9	3/5	4/1	5/4
Bends and fix, each	..	3/10	4/7	5/7	7/3	8/2	12/8
Tees and do.	..	4/-	4/9	5/9	7/5	9/-	13/4
Fire bends	..	1/5	1/9	1/10	2/1	2/9	4/10

Coated iron (M) weight L.C.C. soil and waste fixed with nails and distance		2in	4in
pieces and molten lead joints	..	5/5	7/10 ft run
Extra only for bends and joint	..	14/4	22/11 each
Do. junctions and joints	..	15/10	28/8 do.
Do. cleaning doors	..	15/-	16/4 do.
Domical wire guards	..	2/6	2/9 do.

**PLASTERER—**

Lime and hair	1/2in	Render and set	..	6/8	yd super
Do.	1/2in	Do. float and set	..	8/4	
Sirapite	1/2in	Skimming coat	..	4/-	
Do.	1/2in	Render and set	..	8/-	
Do.	1/2in	Render, float and do.	..	9/10	
Portland	1/2in	Backing coat	..	4/6	
Do.	1/2in	Plain face	..	8/-	
Do.	1/2in	Floor screed	..	4/10	
Keenes	1/2in	Skimming coat	..	5/2	
Dubbing	1/2in	Thick or less	..	2/4	
Metal Lathing	1/2in	mesh by 24 Gauge	..	6/6	
6in by 6in by 1/2in Earthenware Plain Glazed Tiles, in fair quantity, white, and setting (on prepared screed)		..	..	41/6	
Rounded edge. Extra over last		..	..	4 1/2d per ft run	
Angles in do.		..	..	4 1/2d each	
Cutting and fitting. Around pipes or clips		..	..	1/3 do.	
Narrow widths. 3in to 6in wide. Add 75 per cent to plain surface.		..	..	..	
Do. 6in to 12in do. Add 40 per cent to plain surface.		..	..	..	
Sundry labours per ft lineal :—		..	..	..	
Quirk 2 1/2d. Arris 3 1/2d. Fair edge 2 1/2d. Rounded edge 4d.		..	..	..	
Flush bead 1/6.		..	..	..	
Mouldings—5d per in girth.		..	..	..	
Joining new plastering to old 3d.		..	..	..	

**POLISHING**

<b>NEW WORK—</b>		Ft super		Sashwork
Staining, bodying-in and French Polish		2/9	1/9	
Staining and wax polishing on hardwood		1/2	9d	
<b>OLD WORK—</b>		1/2		
Cleaning down old work and repolish		1/2	—	
Stripping, preparing and repolishing		3/-	2/-	

**INTERNAL PAINTING**

With white lead base in common colours, with brushes.

	Knot stop and prime	Prime and paint once	Prime and paint twice	Add for each extra coat
<b>ON WOOD—</b>	2/9	5/5	7/8	2/1 yd super
General surfaces				

Running lengths not exceeding 3in wide					3 1/2d	7d	9 1/2d	2 1/2d	yd run
Do. 3in to 6in wide					5 1/2d	10 1/2d	1/3 1/2	4 1/2d	do.
Do. 6in to 9in wide					8 1/2d	1/4	1/11 1/2	6 1/2d	do.
Do. 9in to 12in wide					11d	1/10	2/7	8 1/2d	do.
Sash square each side					5/4	10/-	14/8	4/1	per doz
Do. in large squares					8/-	15/-	22/-	6/5	do.
Opening edges					7d	1/2	1/9	7d	each
Casement frames each side					4 1/2d	8 1/2d	1/-	3d	yd run
Mullions or transoms, do.					6 1/2d	11 1/2d	1/3	4 1/2d	do.
<b>ON PLASTER—</b>					One coat	Two coats	Three coats		
Paint on surfaces					2/10	5/4	7/8		per yd super
Do. on mouldings					3/2	5/11	8/6		do.
Do. on enrichment					5/8	10/8	15/4		do.
<b>ON STEEL—</b>									
Paint on structural steel					2/3	4/4	6/4		do.
Do. on roof trusses					2/6	4/10	7/1		do.
Do. on metal windows measured over all on both sides, divided into squares					3/3	5/6	7/11		do.
Do. divided into large squares					2/9	4/9	6/4		do.
Do. divided into extra large squares					2/4	3/11	5/4		do.
Do. on opening edges					10d	1/6	2/-		each
Do. on rain water pipe					10d	1/6	2/2		yd run
Do. on do. gutter					1/3	2/8	3/7		do.
Do. on small pipe					3d	6d	10d		do.

**GLAZING (to New Work)**

Polished Plate Glass ordinary substance (about 1/2in), glazing quality, in the following sizes, glazed complete—Per ft super		..	..	..
In plates not exceeding 2ft super in each		..	..	6/2 1/2
Do. 5ft		do.	..	7/3
Do. (unless extra sizes) 45ft		do.	..	8/2
Do. (unless extra sizes) 100ft		do.	..	8/7 1/2
Add extra price for glazing with screw beads or clips 5d per ft super.		..	..	..
Do. if glazing bedded in washleather or velvet 9d per ft run.		..	..	..

**SHEET GLASS, glazed, complete, per ft super, in new work :**

Ordinary quality clear, glazed to wood with putty :—		..	..	..
24oz as described		..	..	1/4 1/2
26oz do.		..	..	1/6 1/2
32oz do.		..	..	1/10 1/2
1/2 figured rolled and Cathedral, glazed		..	..	..
to wood with putty		..	Per ft super	1/6 1/2
Do. in standard tints		..	do.	2/4 1/2
No. 4 Fluted, glazed do.		..	do.	2/3
1/2in Reeded (narrow, board, etc.) do.		..	do.	1/11 1/2
Reedlite do.		..	do.	1/11 1/2
Spotlite do.		..	do.	1/11 1/2
1/2in Rough cast do.		..	do.	1/10 1/2
1/2in DO. wired do.		..	do.	2/1 1/2
1/2in Georgian Rough Cast do.		..	do.	2/1 1/2
Add for glazing all as before but to steel to similar work as above, 1 1/2d per superficial ft.		..	..	..

**PAINTER AND DECORATOR****DISTEMPERING—In common colours, put on with brushes—ON PREPARED SURFACE**

	1 coat	2 coats	Add if required	
per yd super—	(finish)	(under-coat and finish)	Sealing coat	Stipp-ling
Ordinary distemper on flat surface of plaster	9d	1/4 1/2	6d	3d
Washable do. on do. of plaster	1/-	1/10	6d	3d
Add if in margins, narrow widths or panels	30%	30%	20%	50%
Add if on mouldings	50%	50%	45%	—
Add if on enrichments	160%	160%	115%	—

**PAPERHANGING**

Hanging only—		Per Piece—Lining		Pattern
On walls		..	6/10	8/2
On stairs		..	9/4	10/10
On ceilings		..	8/2	9/7

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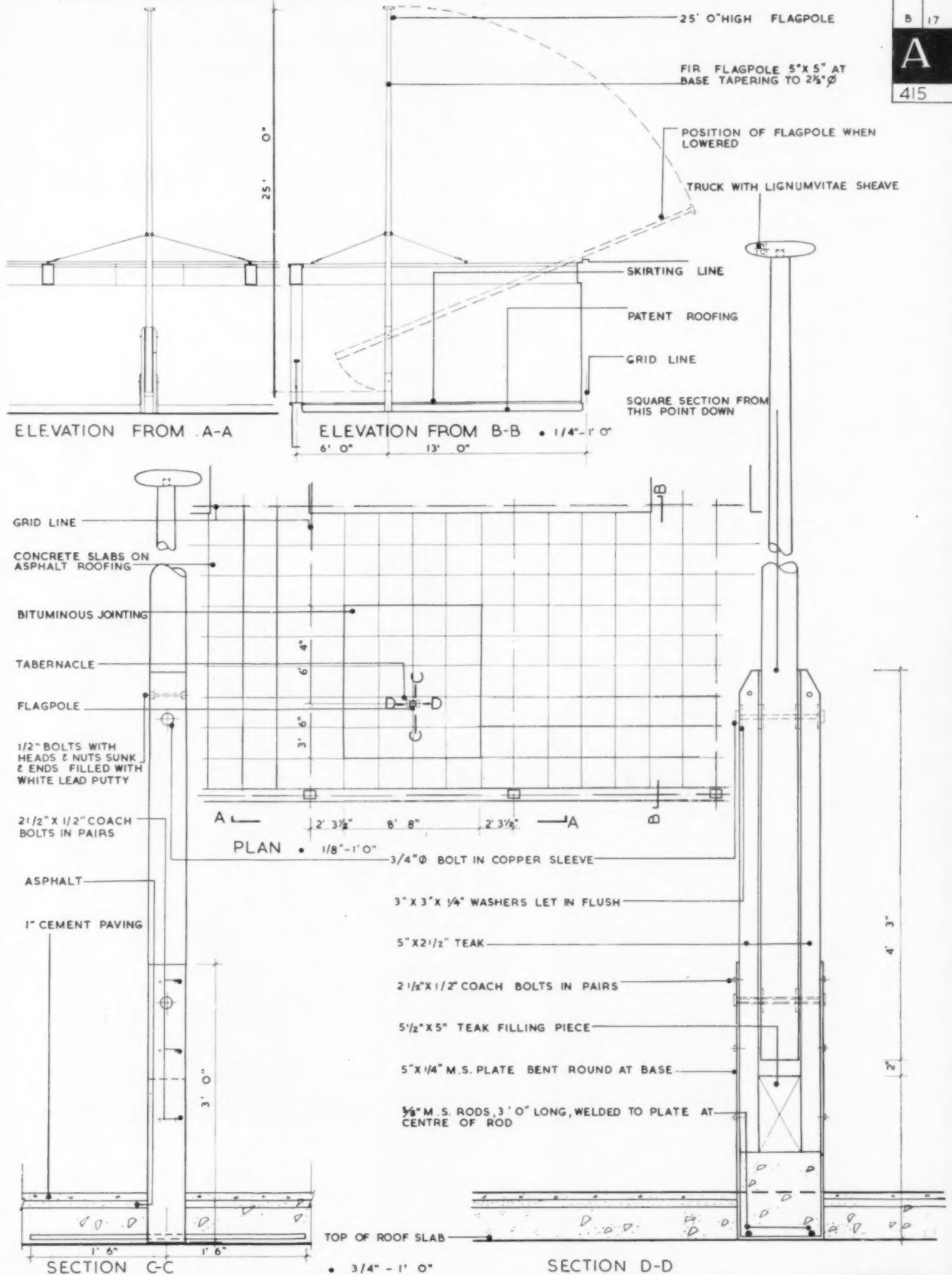
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ARCHITECT: FREDERICK GIBBERD

Notes below give basic data of contracts open under locality and authority which are in a bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

## CONTRACT • NEWS •

### OPEN

#### BUILDING

**BIRMINGHAM C.C.** (a) Alterations and extensions to cottages 9 and 10 at Shenley Fields Cottage Homes, Shenley Lane, Northfield. (b) City Architect, Civic Centre, Birmingham, 1. (c) 2gns. (d) December 17. (e) January 30.

**BLYTH R.C.** (a) Two bungalows at Peasenhall and two bungalows at Snape. (b) Housing Manager, Council Offices, Rendham Road, Saxmundham. (c) 2gns. (e) January 11.

**CAMBRIDGE C.C.** (a) Proposed alterations and additions to Cambridgeshire High school for boys. (b) City Surveyor, The Guildhall, Cambridge. (c) 3gns. (d) January 7. (e) February 11.

**CARLISLE C.C.** (a) Erection of the final stage of the new technical college. (b) Messrs. Buckland and Haywood, Norwich Union Chambers, Congreve Street, Birmingham, 3. (c) £3. (d) January 7. (e) February 12.

**CHESTER R.C.** (a) 12 houses at Liverpool Road, Upton. (b) Council's Architect, Council Offices, 16 White Friars, Chester. (c) 3gns. (e) January 8.

**CROSBY, LITHERLAND AND WATERLOO JOINT CEMETERY BOARD.** (a) Erection of a single-storey office and store buildings, together with a short roadway, paths and drains at Thornton Garden of Rest. (b) Messrs. Ashcroft and Parkman, 38 The Temple, Dale Street, Liverpool, 2. (c) 3gns by cheque, payable to Board. (e) January 7.

**CROYDON B.C.** (a) Erection of one children's home at Shirley and two at New Addington. (b) Borough Engineer, Town Hall, Katharine Street, Croydon, Surrey. (e) January 21.

**CUMBERLAND C.C.** (a) (1) Conversion of former casual ward block to provide additional dormitory accommodation at Station View House, Penrith; and (2) conversion of existing cottage to provide two flats at Whitehaven College of Further Education. (b) County Architect, 15 Portland Square, Carlisle. (e) January 25.

**DROITWICH R.C.** (a) Two pairs of old peoples bungalows at Hartlebury. (b) Council's Engineer, Council Offices, Ombersley Street, Droitwich. (c) 2gns by cheque, payable to Council. (e) January 14.

**DONCASTER R.C.** (a) Erection of (1) 40 houses at Campsall Park; (2) 42 houses at Edlington; and (3) 26 houses at Rossington. (b) Council's Surveyor, Nether Hall. (e) January 11.

**DUNMOW R.C.** (a) Two pairs of houses on the Church Lane estate, Little Canfield. (b) Council's Clerk, The Council Offices, Dunmow, Essex. (c) 3gns. (e) January 7.

address it is the same as the locality given in the heading. (c) deposit, (d) last date of application, (e) last date and time for submission of tenders. Full details of contracts marked \* are given in the advertisement section.

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**EAST BARNET U.C.** (a) Contract No. 840. Carrying out alterations and extensions to pavilion and tea room at Oak Hill Park. (b) Council's Engineer, Town Hall, Station Road, New Barnet. (c) Ign. (e) January 12.

**EAST SUFFOLK C.C.** (a) Erection of extensions estimated to cost £56,000 at Alderman Woodrow secondary school, Lowestoft. (b) County Architect, County Hall, Ipswich. (d) January 4. (e) February 8.

**EAST SUFFOLK C.C.** (a) A pair of police houses and a nurse's house with district room and garage, estimated to cost £7,500 at Bellands Way, Eye. (b) County Architect, County Hall, Ipswich. (d) January 1. (e) January 25.

**EIRE—DUBLIN.** (a) Extension to the third floor of the terminal building, Dublin Airport, for the Department of Industry and Commerce. (b) Room 411, Department of Industry and Commerce, Kildare Street. (c) £5. (e) January 1.

**EIRE—DUBLIN CORPORATION.** (a) Three blocks of 63 flats at Gloucester Place area. (b) City Treasurer, Exchange Buildings, Lord Edward Street. (c) 15gns. (e) January 11.

**GRIMSBY CORPORATION.** (a) Six houses on the Waltham Road frontage of Springfield estate, Scartho, together with appurtenant works of outbuildings, drainage and paths. (b) Borough Engineer, Municipal Offices, Town Hall Square. (c) £2. (e) January 8.

**HEXHAM AND NEWCASTLE DIOCESAN TRUSTEES.** (a) Erection of St. Theresa's R.C. primary school, Harris Street, Darlington. (b) Mr. T. A. Crawford, 80 Borough Road, Middlesbrough. (c) 5gns. (e) January 10.

**IPSWICH B.C.** (a) 32 bungalows together with outbuildings, etc., on Chantry estate, 2B London Road. (b) Borough Engineer, 19 Tower Street. (c) 3gns. (d) December 20. (e) January 24.

**LANGPORT R.C.** (a) Two pairs of houses with services and augmentation of existing sewage disposal works at Kingsdon. (b) Messrs. Darby, Hill and Partners, Westminster Bank Chambers, Taunton. (c) 2gns. (e) January 21.

**LEATHERHEAD U.C.** (a) 34 dwellings at Ashted, Surrey. (b) Council's Surveyor, Red House. (c) 2gns. (e) January 21.

**LEATHERHEAD U.C.** (a) Erection of civil defence training headquarters at Red House. (b) Council's Engineer, Red House. (c) 2gns. (e) January 11.

**LEEDS REGIONAL HOSPITAL BOARD.** (a) Carrying out an extensive scheme of alterations to the psychiatric unit at St. James's Hospital, Beckett Street, Leeds, 9. (b) Board's Architect, Park Parade, Harrogate, Yorks. (c) 2gns. (d) December 29. (e) January 26.

**LINCOLN C.C.—PARTS OF KESTVEN.** (a) Erection of pavilion and groundsman's cottage at The King's School, Grantham. (b) County Architect, County Offices, Sleaford. (e) January 17.

**MANCHESTER CORPORATION.** (a) (1) Alterations to gymnasium and provision of additional changing rooms at South Hulme Girls' school; (2) new changing room and showers at Clare-

mont Road Girls' school; (3) additional housecraft rooms and lavatory accommodation at Ardwick Girls' school; and (4) sanitary improvements at Cavendish primary school. (b) City Architect, P.O. Box No. 488 Town Hall. (e) January 23.

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CENTRE).

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**MIDDLESBROUGH B.C.** (a) Erection of a two-storey building, comprising studios, workshops, craft and lecture rooms for the College of Art, on a site fronting on to Green Lane, Linthorpe. (b) Director of Education, Education Offices, Woodlands Road. (c) 5gns. (d) December 22. (e) January 25.

**N. IRELAND—BELFAST.** (a) Supply and erection of structural steelwork for the new office block to be built in Rosemary Street, Belfast, for the National Society for the Prevention of Cruelty to Children. (b) Messrs. Lewis and Baxter, 16 Howard Street. (c) 2gns by cheque. (e) January 14.

**N. IRELAND—GOVERNMENT OF NORTHERN IRELAND.** (a) Erection

of factory at Strabane, Co. Tyrone. (b) Ministry of Commerce (Room 28), Chichester House, Chichester Street, Belfast. (c) £5. (e) January 11.

**PORTSMOUTH GROUP HOSPITAL MANAGEMENT COMMITTEE.** (a) Decoration and maintenance work (building, engineering, electrical, plumbing, etc.) at various hospitals and other premises under the Committee's control, situated in Portsmouth, Gosport, Fareham, Petersfield, Liss, Emsworth and Havant. (b) Group Secretary, Saint Mary's Hospital, Milton Road, giving details of capabilities, for inclusion in a revised list (which will supersede existing list) of building contractors. (d) December 31.

**SCOTLAND—MIDLOTHIAN C.C.** (a) Several works in the proposed additions and alterations to Newbattle junior school. (b) County Architect, 32 Palmerston Place, Edinburgh, 12.

**SCOTLAND—MIDLOTHIAN C.C.** (a) Several trades in one undertaking concerned with alterations and additions to Penicuik junior school. (b) County Architect, 32 Palmerston Place, Edinburgh, 12.

**SCOTLAND—NORTH OF SCOTLAND HYDRO ELECTRIC BOARD.** (a) Reinforced concrete floors and roofs at an extension to Carolina Port Generating Station, Dundee. (b) R. B. Anderson, 7 Dudhop Crescent Road, Dundee. (e) January 14.

**SOUTHPORT B.C.** (a) Erection of a classroom unit at the Stanley secondary school. (b) Borough Architect, 99/105 Lord Street. (c) 2gns. (e) January 11.

**SOUTH SHIELDS B.C.** (a) 94 houses at Whiteleas estate. (b) Borough Engineer, Town Hall. (c) 2gns. (e) January 8.

**ST. ALBANS C.C.** (a) (1) A block of 24 flats adjacent to Torrington House, Belmont Hill; and (2) a block of 12 flats adjacent to Thorne House, Townsend Avenue. (b) City Engineer, 16 St. Peter's Street. (c) 2gns each contract. (e) January 8.

**STOCKPORT CORPORATION.** (a) Erection of three dwellings at Browning Road, 12 at Houldsworth estate, 18 at Brinnington and 8 at Hartington Road. (b) Borough Architect, Town Hall. (c) 2gns per job. (e) February 4.

**STOWMARKET U.C.** (a) 40 flats in blocks of four at Chilton Hall estate. (b) Council's Engineer, Ipswich Road. (c) 2gns. (e) January 11.

**SUNDERLAND B.C.** (a) Erection of Castle View secondary school and Broadway secondary school on sites on the Hylton Castle estate, and The Broadway, Grindon. (b) Borough Architect, Grange House, Stockton Road. (c) 2gns. (e) January 18.

**SWANSEA B.C.** (a) New Staffroom at Waun Wen infants' school and new lavatories at Hafod junior school. (b) Mr. Oliver S. Portsmouth, 7 Wind Street. (e) January 11.

**WEST RIDING OF YORKSHIRE C.C.** (a) Adaptation of the former day nursery hut to form a nursery school at Guiseley, near Leeds. (b) Deputy County Architect, Bishopgarth, Westfield Road, Wakefield. (e) January 14.



## PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

**WORCESTERSHIRE C.C.** (1) Erection of Dyson Perrins Special Agreement secondary school. (3) Thomas Broad Ltd., Graham Road, Malvern. (4) £104,950. (1) Extensions to secondary school. (2) Evesham. (3) Espley and Co. Ltd., High Street, Evesham. (4) £86,250. (1) Primary school. (2) Waseley Hills, Rubery. (3) J. Harper and Sons Ltd., Blackheath, near Birmingham. (4) £55,595. (1) Junior school. (2) Chawson Estate, Droitwich. (3) C. C. Lam-pitt, Malvern Link, Worcs. (4) £52,501. (1) Special day school and workshop block. (2) Halesowen College of Further Education, and Halesowen School. (3) Thomas Teisen, Eckershall Road, Kings Norton. £40,597 and £17,750.

**BILLINGE AND WINSTANLEY U.D.C.** (1) 20 houses. (2) Cob Moor Estate. (3) Gregory Construction (North Western) Ltd., 37 Hope Street, Liverpool. (4) £27,280.

**TAUNTON B.C.** (1) 28 houses. (2) Priorswood Estate. (3) W. J. Pople and Sons, High Street, Burnham-on-Sea.

**S.W. REGIONAL HOSPITAL BOARD.** (1) Nurses' home and hospital block (2) Farnham Hospital, Surrey. (3) Caesar Bros., 47 Union Street, Aldershot, Hants. (4) £60,234.

**NUNEATON B.C.** (1) Secondary school. (2) Higham Lane. (3) Gray Ltd., Broad Street, Coventry. (4) £61,270.

**LONDON COUNTY COUNCIL.** (1) 84 flats, 26 houses. (2) Eliot Bank, Lewisham. (3) Wates Ltd., 1258 London Road, Norbury, S.W.16. (4) £334,300. (1) 15 flats, 17 houses. (2) Hainault Estate, Essex. (3) Charles S. Foster and Sons Ltd., Loughton, Essex. (4) £65,811.

**HASLINGTON U.D.C.** (1) 30 houses and flats. (2) Broadway. (3) D. L. Grimshaw Ltd., Rawtenstall. (1) Four shops and flats. (2) Broadway. (3) C. Taylor and Sons Ltd., Bacup. (4) £12,100.

**HULL CITY COUNCIL.** (1) 201 houses. (2) Great Fields Estate. (3) E. Barker Ltd., Marfleet, Hull. (4) £259,375.

**ESSEX C.C.** (1) Second instalment of North Walthamstow Technical College. (3) J. and J. Dean (Contracts) Ltd., Ruckholt Works, Ruckholt Road, London, E.10. (4) £606,346.

**HEMEL HEMPSTEAD.** (1) Home for aged and infirm, for Herts C.C. (2) Adeyfield Road. (3) Bury Building Co. Ltd., Long Lane, Bovingdon. (4) £48,142.

**HENDON B.C.** (1) 88 dwellings. (3) John Laing and Son Ltd., Mill Hill, London, N.W.7. (4) £206,000.

**KENSINGTON B.C.** (1) 22 flats. (2) Clarendon Road. (3) W. Walkerdine Ltd., 115A Walmer Road, London, W.10. (4) £38,479.

**LEAMINGTON SPA B.C.** (1) 22 flats, six bungalows, seven houses. (2) Kingsway Corner. (3) Clarke Bros. Ltd., 34 Clarendon Street, Leamington. (4) £57,647.

**LIVERPOOL.** (1) Erection of a carriage cleaning depot. (2) Kirkdale, for British Railways. (3) Morrison and Sons Ltd., Grange Terrace, Liverpool.

**LONDON, E.C.** (1) Rebuilding "Three Compasses" licensed premises. (2) Cowcross Street, E.C.1. (3) Kilby and Gayford Ltd., 87 Worship Street, London, E.C.2.

**GRIMSBY B.C.** (1) 84 flats. (2) Bath Street re-development area. (3) Wilkinson and Houghton Ltd., Sidney Street, Cleethorpes.

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**SOUTHAMPTON.** (1) Warehouse and offices for Geo. Monro Ltd. (3) E. H. Burgess Ltd., Northam, Southampton.

**DARLINGTON.** (1) Reconstruction of County Hotel. (2) Blackwellgate. (3) Snowden Bros., Belford Road, Sunder-land.

**WORCESTERSHIRE C.C.** (1) College of Further Education. (2) Bromsgrove. (3) W. Cooper and Son (Blackheath) Ltd., West Street, Birmingham. (4) £237,304.

**COVENTRY.** School, for Rev. W. Confrey. (2) Deedmoor Road. (3) James O'Flanagan Ltd., Broad Street, Coventry.

**COVENTRY CITY COUNCIL.** (1) School. (2) Allesley Hall. (3) Garlicks Ltd., 42 Far Gosford Street, Coventry. (4) £45,563.

**CHELtenham B.C.** (1) 54 maisonettes, site works, etc. (2) Arla and Hesters Way Estate. (3) Costelloe and Kemple Ltd., 98-100 Prestbury Road, Chelten-ham. (4) £132,111.

**EALING B.C.** (1) 36 flats. (2) Fair View Estate. (3) Wembley Constructions Ltd., 80 Sunleigh Road, Wembley. (4) £62,753. (1) 18 flats. (2) Whitton Avenue. (3) G. Moss and Sons Ltd., Southall, Middlesex. (4) £34,149.

**GREENWICH.** (1) 44 houses and block of 11 flats. (2) Blackheath. (3) Wates Ltd., 1258 London Road, Norbury, S.W.16.

**SUTTON AND CHEAM B.C.** (1) 27 dwellings. (2) Stanmore Gardens, Benhill Wood Road. (3) M. Howard (Mitcham) Ltd., Wandle House, London Road, Mitcham, Surrey. (4) £64,471.

**SQUIRRELS HEATH, ESSEX.** (1) Erection of All Saints Church. (3) J. T. Luton and Son Ltd., 14 Forest Lane, London, E.15. (4) £17,000.

**COVENTRY CITY COUNCIL.** (1) 177 dwellings, 59 garages. (2) Bell Green District Centre. (3) Geo. Wimpey and Co. Ltd., Hammersmith Grove, London, W.16. (4) £267,448.

**ISLE OF ELY C.C.** (1) Residential block. (2) College of Further Education and Horticultural Institute. (3) Bettles Building Co. Ltd., of Peterborough. (4) £50,738.

**WASHINGTON (CO. DURHAM) R.D.C.** (1) 96 houses. (2) Coach Road Estate. (3) J. and T. Robson Ltd., of Washington. (4) £119,842.

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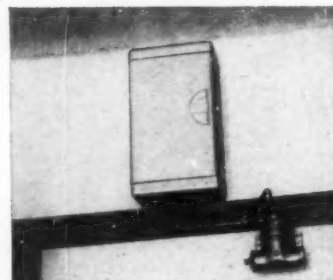
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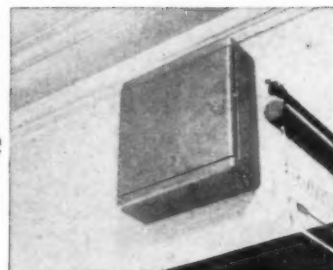
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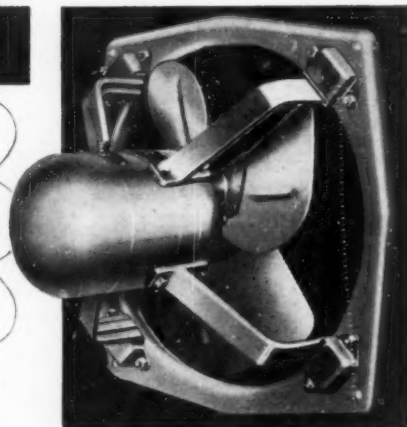
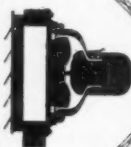
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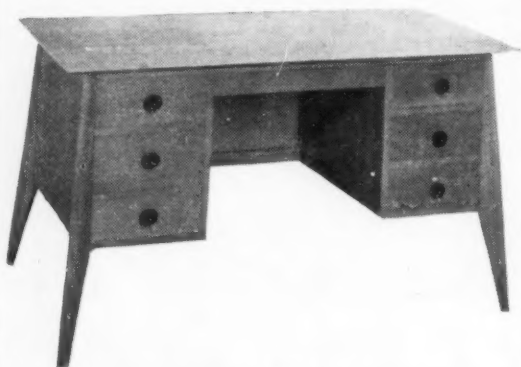
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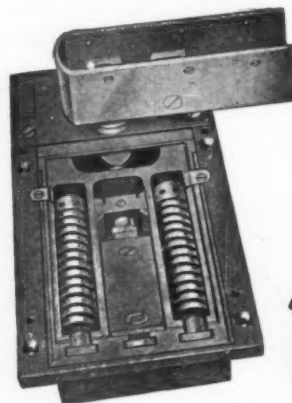
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5"		36 lb.	C5 Incl. 2" Structural Screed on 3" Wood Wool Slab	Case 1	12' 6"	12' 0"	11' 6"	11' 3"	10' 3"	10' 0"	—	—
5"		38 lb.		Case 2	13' 9"	13' 6"	13' 0"	12' 6"	11' 9"	11' 0"	—	—
5"		40 lb.		Case 3	—	—	—	13' 9"	13' 0"	12' 3"	—	—
5"		42 lb.		Case 4	—	—	—	—	—	13' 0"	—	—
7"		35 lb.	X7	Case 1	20' 6"	19' 6"	18' 8"	17' 9"	16' 5"	15' 3"	13' 3"	11' 11"
7"		36 lb.	do.	Case 2	23' 8"	22' 5"	21' 8"	20' 5"	18' 11"	17' 8"	15' 4"	13' 9"
7"		40 lb.	do.	Case 3	25' 5"	24' 1"	23' 1"	22' 1"	20' 6"	19' 2"	16' 9"	15' 0"
7"		42 lb.	do.	Case 4	—	26' 9"	25' 7"	24' 6"	22' 9"	21' 4"	18' 8"	16' 9"
7"		60 lb.	do.	Case 5	—	—	—	—	—	—	25' 5"	23' 0"
9"		47 lb.	X9	Case 1	30' 5"	28' 10"	27' 10"	26' 6"	24' 9"	23' 2"	20' 4"	18' 4"
9"		53 lb.	do.	Case 2	35' 4"	33' 8"	32' 4"	31' 0"	29' 1"	27' 3"	24' 5"	21' 8"
10"		55 lb.	I10	Case 1	36' 9"	35' 2"	33' 10"	32' 7"	30' 5"	28' 8"	25' 2"	23' 0"
10"		60 lb.	do.	Case 2	41' 6"	39' 10"	38' 4"	37' 0"	34' 8"	32' 10"	29' 0"	26' 4"

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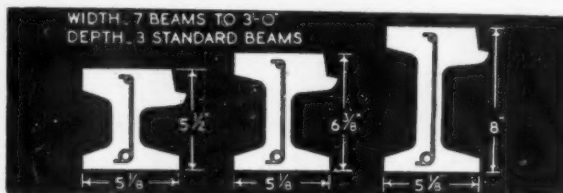


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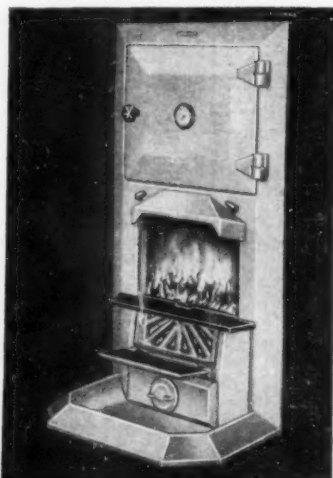
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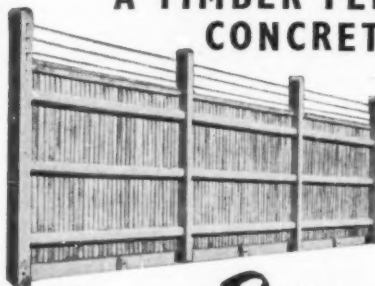
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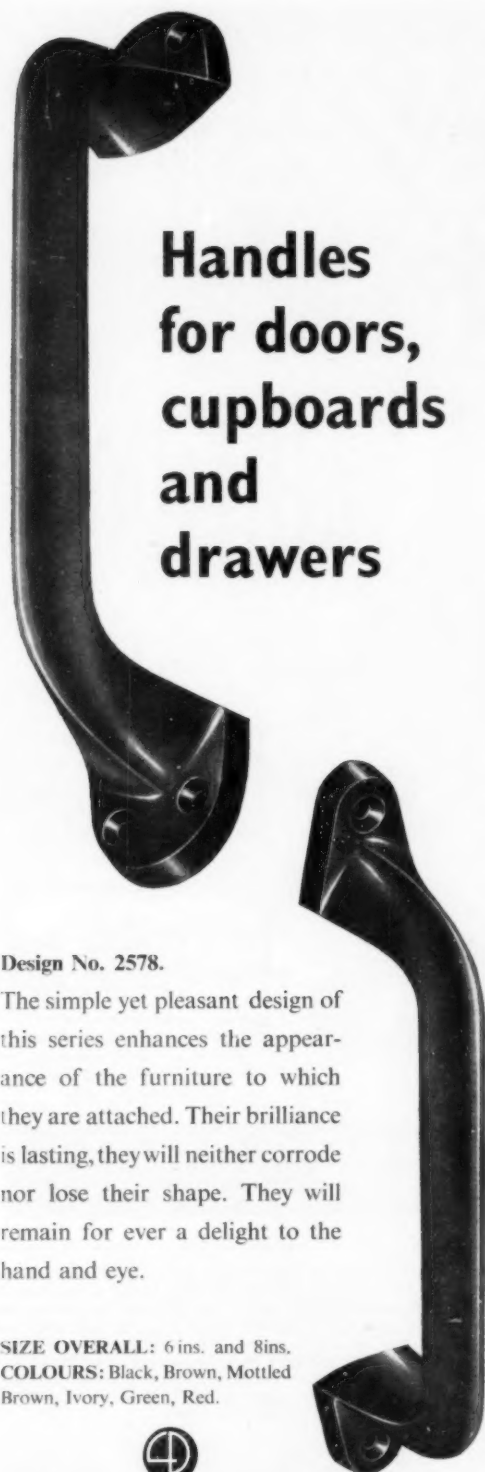
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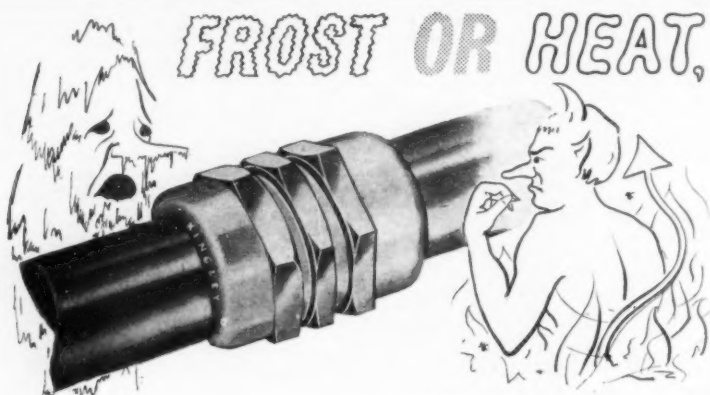
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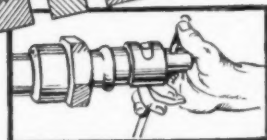
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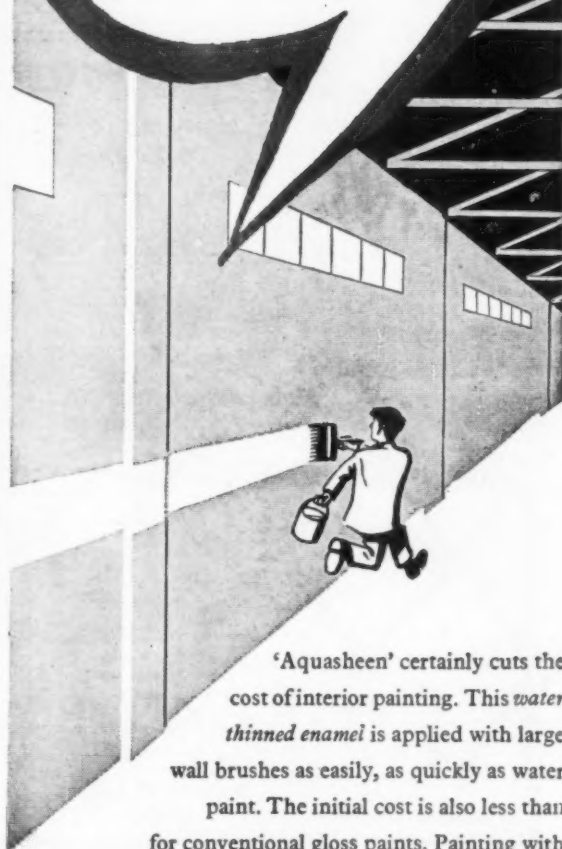
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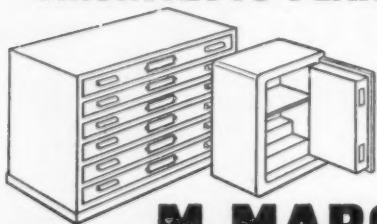
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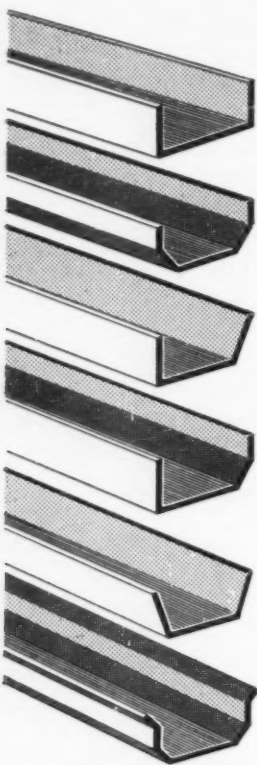
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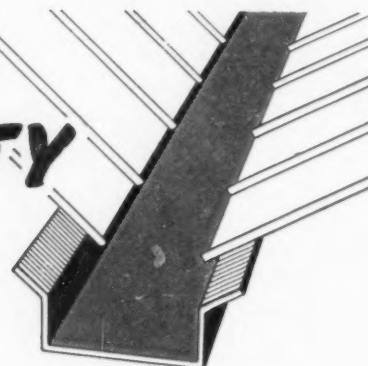
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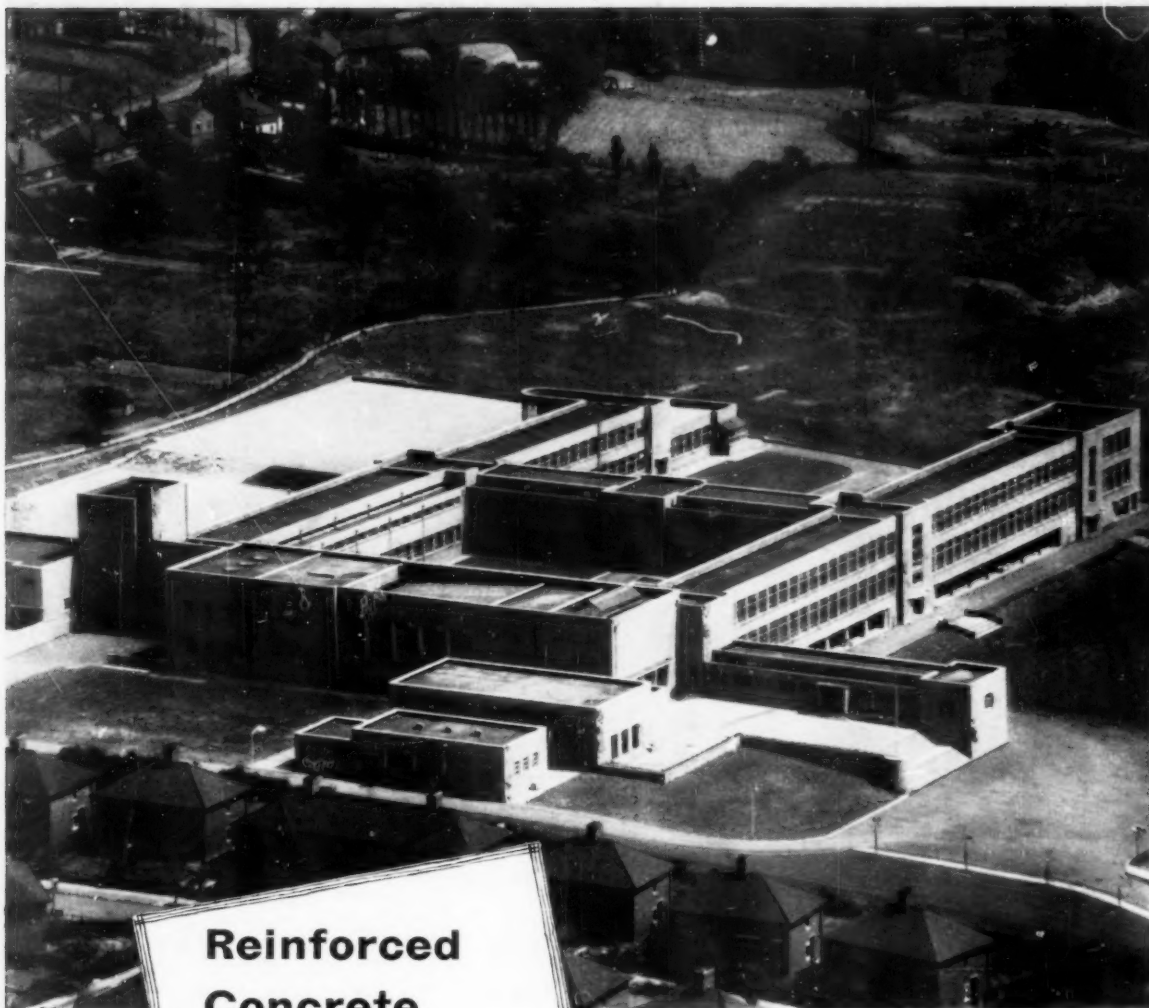
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